InterSystems Middle East

TrakCare 2020: What's New?

InterSystems
TrakCare

Contents

1. New Features

1.1. Encounter Record

Introduction:

The Encounter Record provides a highly configurable workspace that allows for centralized quick access to multiple functions and is the main clinical documentation tool.

Benefit of new functionality:

TrakCare Encounter Record enables a care provider to document an encounter with a patient and automatically produce a text representation of the information gathered and the actions taken. It is the main user interface for a care provider while documenting the care delivery with and for a patient. It is designed as a problem-oriented medical record and a central workstation from which care providers can perform most actions while in a patient encounter.

Another purpose of Encounter Record is to have a fully integrated solution for viewing and storing the patient information by combining the Encounter Record (including EPR) and Flowsheets. Unifying the Encounter Record and Flowsheet actions would bring new functionality to both. It also means we do not need to create each action twice. Actions taken in the Flowsheet would automatically be converted into a textual representation allowing us to create better operative reports. This is planned as the second phase of Encounter Record Project.

1.2. Dynamic Patient Lists

Introduction:

Dynamic Patient Lists will allow the identification of patients with common demographic and clinical criteria in order to enhance operational efficiency, recognize gaps in quality of care and identify potential patient safety issues.

Description of new functionality:

Users with access to Dynamic Patient Lists will be able to apply criteria defined in a Visual Rule (that has been created for Dynamic Patient Lists) to a specific population of patients. These groups of patients may include those who are currently inpatients or emergency department patients, those who are currently in a specific location, those who have an outpatient appointment with a given care provider or at a specific location, those who have had a relationship with a given care provider (as an episode or consulting care provider) or those who have been recently discharged.

Lists can be shared with other groups of users based on location, security group, a combination of security group and location or with a specified list of users.

A Patient List Summary page will enable users who created Dynamic Patient Lists or with whom one or more patient lists have been shared to view a listing of those patient lists to which they have access. Information presented includes the name of the list, who the list is shared with, who created the list and when and who last updated the list and when.

The specific patient list page will allow users to view a listing of the patients who meet the criteria for the list. For each patient, the user will be presented with information about the patient, the relevant clinical episode, and the specific reason for that patient's inclusion on the list. Users will be able to add patients to the list or remove patients from the list. In addition to having access to the patient-specific menu, users will be able to select a group of patients and create a task that can be assigned to a different user in order to follow up on a specific issue or question.

Benefit of new functionality:

Empowering Providers: The patient list project allows access to information about groups of patients who satisfy particular clinical criteria in order to improve the efficiency and quality of care. As providers are asked to enter more coded information into the Electronic Health Record, concerns have been raised across the industry that it is difficult to retrieve that information at a population level in order to apply it for clinical use. Dynamic Patient Lists allows the retrieval of that information from groups of patients in order to follow up on important clinical questions.

Value to the Organization: The patient list project allows organizations to define lists of patients for particular focused areas of care that could lead to quality improvement.

1.3. Handover:

Introduction:

In response to the expectation and demand by TrakCare's current and future customers for more clinically rich, easy-to-use and intuitive software the current Clinical Handover functionality whilst in use by customers across the regions in various contexts has been raised as problematic and in need of further development. The primary issues and concerns raised include but are not limited to: lack of version control, whereby each recording in the handover component may overwrite the previous entry so information is no longer viewable; auditing is very limited and it is difficult to retrieve the data available; configuration for use by different specialties with different users is limited and; many of the data entry fields are duplicated by clinical content now captured within TrakCare – there should be only a single source of data to ensure accurate data capture and minimize manual repetitive data entry.

Many health bodies across the regions, including the Australian Commission on Safety and Quality in Health Care, have invested much time and research into the area of Clinical Handover. In response to the Safety and Quality Improvement Guidelines that have been provided, hospitals are now implementing Clinical Handover Protocols that meet these guidelines.

In Standard 6 of the Safety and Quality Improvement Guide by the Australian Commission on Safety and Quality in Health Care, Clinical Handover is defined as the transfer of professional responsibility and accountability (transfer of care) for some or all aspects of patient care, to another person or professional group on a temporary or permanent basis

The Transition of Care is a set of actions designed to ensure coordination and continuity of care as patients transfer between services. Transitions of care occur in real time, during weekdays, weekends and overnight, and are usually short lived and often involve clinicians that do not have an ongoing relationship with the patient. They occur when a patient is leaving a health service or being transferred to a different institution or level of care, and generally consist of one or more clinical handovers. The process ends only when the patient is received into the next clinical setting. Transition of care is heavily involved in the processes of admission, referral and discharge and is considered a unique and distinguished process from any other health care setting. (Std 6 Clinical Handover – Safety and Quality Improvement Guide, Australian Commission on Safety and Quality in Health Care).

The Principles for Handover as per the Australian Commission on Safety and Quality Healthcare include:

Principle 1: Preparing for handover

Clearly allocating staff roles is essential to reduce disruption and ensure safe patient care during handover.

- Ensure all participants, the venue and the time of handover are nominated.
- Prior to handover, the clinicians should obtain all relevant documents.

Principle 2: Organising the relevant workforce members to participate

- Make sure all participants have arrived before starting the handover.
- Handover of patients should be supervised by a designated leader.

Principle 3: Being aware of the clinical context and needs

Handover should include notification about patients who might require significant levels of care or immediate attention; are deteriorating or might deteriorate; or present occupational safety issues.

Principle 4: Participating in effective handover resulting in transfer of responsibility and accountability for care

The handover of individual patients must be achieved through a standardised content delivery and should include the transfer of accountability and responsibility.

Clinical handover is practised in various ways. Handover occurs at a shift change, healthcare professional changeover, inter- and intra-hospital/unit/service patient transfer, patient admission, referral or discharge, during and after emergency events such as Code Blue and Medical Emergency Team (MET) calls. Handover methods may include: verbal – face-to-face, telephone or tele-health; written – written documentation, E-mail or electronic handover tools or systems. Face-to-face handover may occur: at the patient's bedside, in a common staff area or at a hospital or clinic reception. The location for the handover will be determined by the nature of the handover and the need to respect the privacy and confidentiality of the patient.

Preparation for handover ideally occurs just prior to the actual handover. The handover process must be efficient and brief to ensure the transfer of the most recent and relevant patient care requirements are communicated; noting that some knowledge may already be known to the clinician receiving the handover.

Tools that may be included vary according to the setting and may include handover sheets, patient medical records, patient boards etc. The information recorded and delivered during the handover should be succinct, factual and include the transfer of the responsibility of care. The use of tools as a guideline for the data captured may be used and include, for example, ISBAR (Identify, Situation, Background, Assessment and Recommendation). It is also important that one tool is used by all clinicians to update clinical handover information. The standardised information (minimum data set) must be flexible enough to accommodate many different clinical scenarios.

Description of new functionality:

The new handover tool provides a workflow-based function that is structured, patient centered and optimized to assist clinicians with continuous quality care through clear concise communication and documentation. The new function allows users to perform handover on one or more patients, utilise a template to structure handover documentation and store this information in the patient's clinical record.

Benefit of new functionality:

- Improved integration of handover documentation with the patient's clinical record
- Improved handover audit capabilities
- Improved support for different handover methodologies.

1.4. Patient Weight

Introduction:

Weight measurement documentation has seen significant development in TrakCare in recent versions. Separate weight fields and how they interact with each has caused confusion and inconsistent behavior, which in turn poses clinical risk, particularly with respect to weight-dependent medications/prescribing.

- Ensure all patient weights are in one location, i.e, the Electronic Patient Record.
- Ensure administrative weights are managed separately and do not impact clinical weight measurements.
- Provide a mechanism to allow sites to define a default weight unit of measure view based on the patient's age.
- Give context to weight as displayed in the patient banner by providing the date and time the weight was recorded.

Description of new functionality:

- Consolidates all weights entered in TrakCare, so they display in the Electronic Patient Record.
- Separates DRG (Diagnosis Related Groups) Coding Weight from clinical weights entered in the EPR or displayed in the patient banner.
- Adjusts the display of weight UOM (unit of measure) based on age as defined in a system setting.

Benefit of new functionality:

- Ability to record weight independently for clinical and DRG purposes.
- One central location where all weight measurements are available and can be easily viewed.
- Ability to define default weight display based on patient age for both coding and clinical screen.

1.5. Clinical Continuity of Care

Introduction:

For administrative purposes, a single clinical episode is often split into more than one TrakCare episode. The two most common scenarios in which this occurs are the Emergency to Inpatient transition and statistical discharges (an inpatient to inpatient transition done for administrative purposes only). In both cases, a patient is first discharged from their original episode before a new episode is created, which can result in a loss of clinical continuity, particularly with respect to patient orders.

Prior to this development, order behavior at the time of discharge was determined by a series of parameters that affected order status, future administration node behavior, overdue node behavior, and more. These parameters controlled the behavior of all discharges as a whole and often resulted in the obscuring of order data across these administrative episodes. In order to maintain clinical continuity for statistical discharges or ED -> IP transitions, new functionality has been introduced to allow orders to continue unchanged across episodes.

Description of new functionality:

A new system parameter called 'Exclude Linked Episode Orders from Discharge Behavior' allows orders placed in an episode from being altered at the time of discharge when there is an automatically linked episode downstream created as part of Emergency to Inpatient or Statistical Discharge workflows.

With the parameter selected, orders from the originating episode are not altered with regard to status or administration nodes and can be actioned in a linked episode with no loss of data. Orders are never moved from their original episode.

Orders can be actioned in either the originating or the destination episode and changes will be reflected in each episode, i.e., bidirectional linking.

Episode linking has been enhanced to allow for cascading linking between multiple episodes. In this scenario, orders from an originating episode may persist into several episodes linked downstream.

Since orders are never relocated from their originating episodes, in order to ensure that they continue to display appropriately in various workflows based on the patient's current location, enhancements have been made to the following:

- Pharmacy Workbench
- Pharmacy Workbench – Unit Dose
- Pharmacy Review
- Global Dispensing
- Nurse Worklist
- Order Worklist
- Nurse Tasklist
- Radiology Workbench.

When a patient is formally discharged, pre-existing discharge behavior will continue as normal.

Benefit of new functionality:

In conjunction with existing functionality that allows EPR data to be displayed across linked episodes, this development allows orders to continue across linked episodes with no loss of integrity or clinical context, allowing for a more seamless continuum of care.

1.6. Continuous Infusion Rate Range

Introduction:

It is common for physicians to prescribe infusions stating a minimum and maximum rate. The prescriber's intention is to specify the recommended rate range whilst the nurse can vary the infusion rate within the range in response to patient's condition. There are several examples for that practice, including heparin, insulin and inotrope infusion.

Description of new functionality:

This functionality is to support prescribing and administration of rate range infusions. This development enables a prescriber to indicate that rate titration may be required. Based on this, new fields are enabled to enter minimum and maximum rate, whilst the starting rate is optional. At the administration time, users choose to enter either a flow rate or delivery rate, and the system auto-calculates the value of the other.

Additionally, this development supports order set locking of rate range, to enable the healthcare organizations to fix the values of the protocols, preventing certain/all users from exceeding pre-set rate values.

Benefit of new functionality:

- Supports structured entry for infusion rate range values
- Provides flexibility when prescribing a rate range as starting rate is an optional value
- Provides flexibility at administration time for nurses to enter the value of the rate based on how the protocol was created and communicated.

1.7. Laboratory Batch Validation and Batch Referral from Laboratory Queues

Introduction:

As the number of tests increase in proportion to the throughput and capacity increase resulting from enhanced instrumentation and reduced analytical timing, the onus falls on laboratory staff to validate the results obtained in line with the clinical information supplied as part of the screening process. Whilst testing numbers are low, the current functionality in TrakCare Lab Enterprise is adequate; however, where thousands of entries are ready to be validated, a significant delay in result processing will be incurred by the laboratory, potentially affecting the timely treatment of the patient. TrakCare Lab Enterprise did include functionality to bulk authorise/validate as this is deemed to be clinically unsafe because a user could validate a result without viewing the result itself in the application.

Description of new functionality:

Lab Queues component (LBVerificationQueue.WorkBench) has been modified to support the bulk processing through the verification workflow based on configuration options on the Queue Code table and the Test Set Code table. This enables a user to select a group of test sets in the queue (or all test sets) to invoke the validate function. Based on Automatic Authorisation criteria defined against the test set and the associated verification queue workflow, the test set progresses accordingly. This complies with the Clinical Safety mandates within the product as the validation is code table controlled. In addition, the functionality has been extended to enable a bulk referral to another queue to allow negative/positive reviews to be implemented.

Benefit of new functionality:

Introduces additional functionality to the system to meet the operational requirements of high-volume testing and screening laboratories within the boundaries of Clinical Safety compliance. Significant improvements in turnaround time will be achieved in laboratories where Automatic Authorisation of a result direct from an instrument is not recognized or encouraged.

1.8. Laboratory Significant Results:

Introduction:

A Test Set can have multiple Test Items; however, a site may only be interested in select key Test Items to drive workflow, either through decision support (visual rules) or other mechanisms (such as Additional Verification Workflow or Automatic Authorisation Rules). Configuring Visual Rule conditions based on the Lab Test Item (VR) cube has been found to have a negative impact on performance because of the amount of condition evaluation required.

Description of new functionality:

The ability to configure a Test Set > Test Item for Significant Result Evaluation based on Abnormal or Critical criteria, and to ignore delta check passes. At the Test Item and Test Set level, based on the configuration, this will give an indication that a Significant Result exists. An icon displays at the Lab Episode and Test Set level indicating Significant Result(s) exist. Significant Result indication can be then be used in

- Result Entry searches
- Visual Rule conditions
- Additional Verification Workflow
- Automatic Authorisation Rules

Benefit of new functionality:

Improvement in Visual Rule performance by evaluating Visual Rule conditions at the Lab Test Set (VR) level. Ability for site to configure individual Test Set > Test Items of interest for presence of results they consider to be significant, and direction of subsequent workflow based on this Significant Result indication.

1.9. Laboratory Work Area Receive

Introduction:

TrakCare used not to support specimen traceability across the system.

Description of new functionality:

A new menu called Lab Work Area Reception has been created to allow laboratories to track the movement of specimens across work areas and departments.

Benefit of new functionality:

- Implements a selective and on-demand allocation of departmental numbers as well as the use of a departmental Lab Episode Number
- Implements functionality to fully support a central and departmental reception model of laboratory
- Implements functionality to support manual allocation of specimen numbers to specimens that have been collected outside the laboratory in a TrakCare Order and Collection process
- Provides a set of functionalities to support further sales with regards to Case Based working as well as provide greater visibility to the question, “Where is the specimen I’m looking for?”
- Provides a foundation for developments where specimen linking and patient linking (for example, Outbreaks, Genetic Studies on Families, etc.) can be built in to future projects.

1.10. Order Indication

Introduction:

Order indication specifies the reasons an item (i.e., medication or non-medication) is prescribed. For example, the order indication for cephalexin may be urinary tract infection. Documentation of the order indication at the time of prescribing means that this information can be conveyed to other healthcare professionals, so they are aware of why the item has been ordered.

With the exception of the PRN indication field (which is specifically for PRN order items), TrakCare does not currently have a field dedicated to recording order indication (for order items in general) within the Order screen.

Description of new functionality:

TrakCare now has a field within the Order screen where order indication can be specified for medication and non-medication items.

Benefit of new functionality:

Clinicians will be able to see why an item (i.e., medication or non-medication) is prescribed.

1.11. Permit Omission of Dose Options

Introduction:

For medications prescribed as intermittent infusions, the dose duration options are currently mandatory. In some hospitals, it is acceptable business practice that prescribers do not specify the dose duration options for intermittent infusions when ordering, and instead, rely on nurses and pharmacists to set the appropriate dose duration options based on the administration protocols/rates.

Description of new functionality:

The new functionality enables doctors to place orders for intermittent infusions without needing to specify dose duration option. This can be done by ticking a new check-box titled 'Per Guideline' within Order Details, so that the nurse or pharmacist can determine dose duration details further down the workflow.

Benefit of new functionality:

Supports different practices and allows the prescriber to proceed with ordering even if unsure of the correct dose duration option.

1.12. Recording and Alerting of Non-allergic Drug Intolerances, Sensitivities, Avoidances

Introduction:

Some adverse reactions to medications can be clinically significant but not be classified as an allergy, e.g., sensitivities or intolerances.

TrakCare enables the recording of allergies but used not to allow recording of sensitivities or intolerances.

Description of new functionality:

The ability to record drug sensitivity has been added to TrakCare. Specifically:

- The allergy profile can now be configured to display only allergies, only sensitivities or both.
- A new column titled Adverse Reaction type has been added to the allergy list to differentiate between allergies and sensitivities.
- A new action, 'Add sensitivity', is now available in the ACN.
- Order Alerts display when a patient has been prescribed a medication to which they are sensitive.

Benefit of new functionality:

Clinicians can now differentiate between allergies and sensitivities recorded for patients.

Display flexibility as the allergy profile can now be configured to display only allergies, only sensitivities or both.

1.13. Restrict Medication Administration by Role

Introduction:

Different healthcare practices allow different levels of access to the medication chart. Student nurses or some allied health professionals such as dieticians, for example, can have access to review a patient's medications without being able to administer. Other users, for example respiratory therapists, may only be authorized to administer certain medications such as nebulizers, but not any other medications.

Description of new functionality:

TrakCare supports applying restrictions on medication administration at the access profile level. The system administrator can define whether the users linked to a specific access profile are allowed to administer medications or restricted from administering all medications. An exceptions list can be added as a second level of permissions. So, if the user is generally allowed to administer medications except in certain cases this is also supported in the new functionality. Each exception rule can be either by administration route or an order group, i.e., Classification Scheme or a combination of both. The same applies when the user is restricted from administering all medications with some exceptions.

When the user is restricted from administering a medication the access to the administration screen will be blocked from the medication administration lists (Clinical Profile, Nurse Worklist, Nurse Tasklist, Barcode Drug Administration and Multi-admin Screen).

Benefit of new functionality:

The new functionality will allow TrakCare to adapt to different practices and provide customers with the flexibility to configure rules that match their policies. Previously, it used customized functions and layouts as a workaround. With the new functionality, those can be retired.

1.14. Standard Billing – Advance Payment Invoice

Introduction:

Advance Payment Invoice has been added to Standard Billing.

Description of new functionality:

- Advance Payment Invoice allows the creation of an invoice for the expected the amount to be billed to the patient for the health care service.
- Allows the Advance Payment Invoice to be issued to the patient for payment; and, if required, debtor follow-up.
- Links the Advance Payment Invoice to the patient health care service, so reduces the amount billed to the patient. The amount billed to the patient will be reduced by the Advance Payment Invoice amount.
- Additional options allow for selected order items to be included in the Advance Payment Invoice, and to reduce the amount to be invoiced by amount or percentage.

Benefit of new functionality:

For Standard Billing, provision of an additional option to provide estimated and repayments for health care services. This is in response to healthcare services billing and reimbursement requirements.

1.15. Standard Billing – DRG Billing

Introduction:

DRG Billing has been added to Standard Billing.

Description of new functionality:

- Inpatient episodes can now be billed based on the DRG of the episode.
- DRG Billing charges a single amount for the episode, all other Order Items will be billed zero, with exceptions.
- The amount charged is calculated, as follows: DRG weight by a DRG Base Rate. The weight of the DRG will vary per DRG; the base rate will remain constant. Example if the weight of the DRG is 1.4257 and the base rate is 6400, the amount charged will be 9124.48 (1.4257 x 6400).

- The ability to define Order Items included in the DRG Billing amount is available. Order Items not included will be billed in addition to the DRG Billing Amount.
- The ability to define a limit amount of the Order Items included in the DRG Billing amount is available. If the limit is exceeded, an additional Outlier Order Item will be added and the amount billed for the item is calculated. The High Cost Order Items will be included in the Outlier Order Item calculations.
- The ability to define a limit of High Cost Order Items included in the DRG Billing amount is available. If the limit is exceeded, a High Cost Order Item will be added and the amount billed for the item is calculated. The Order Items considered as High Cost Order Items are defined.
- The ability to define a limit of High Cost Pharmacy Order Items included in the DRG Billing amount is available; if the limit is exceeded, a High Cost Pharmacy Order Item will be added, the amount billed for the item is calculated. The Order Items considered as High Cost Pharmacy Order Items is defined.

Benefit of new functionality:

For Standard Billing, provision of an additional option to bill for an Inpatient Episode. This is in response to inpatient healthcare services billing and reimbursement requirements.

1.16. Scheduling Inpatient Episodes

Introduction:

Scheduled patient encounters/services may be considered as either inpatient or outpatient episodes depending on regional variation. This development expands existing resource scheduling functionality to accommodate situations where intermittent scheduled care delivery should be reported as an inpatient episode.

Description of functionality:

- Services scheduled with the following configuration will result in both an appointment and an inpatient episode linked to that appointment.
- Order item/service with the 'Generate inpatient episode flag' checked
- A defined Ward in the IP booking accordion of the Resource Schedule

This development has been integrated with existing waiting list (WL) functionality. Scheduling an appropriately configured service via a WL will result in both an appointment and an inpatient episode.

- When a Waiting List is configured with a 'When to take off waiting list' reason of 3'On registration', the following activities occurring during patient care update to reflect the status of care – waiting list, to come in (TCI), appointment and episode – will result in corresponding updates to each item.
- During the booking workflows where the episode is auto-created, the system can be set up to use the conditions for Episode Auto-creation to create inpatient or outpatient episodes, with inpatient episodes taking precedence over outpatient episodes. Additionally, if an inpatient appointment is booked and an outpatient episode already exists for the same condition for episode auto-creation, the system will convert the outpatient episode into an inpatient episode and link the inpatient appointment to it.

Benefits of functionality:

This function allows the system to use the power of resource scheduling to create inpatient episodes for appointments which require longer duration and special patient care.

It also allows users to combine inpatient and outpatient appointments under an inpatient episode based on the site's rules for episode auto-creation.

2. Obligatory Enhancements

2.1. Active Clinical Notes

- Relabeled 'History of Present Illness'
  - alter wording of 'History of Present Illness' to 'History of Present Condition' so that it does not silo everything as illness related.
- The 'Anaesthetic and Operation All Episodes' EPR chart does not display the 'New' button by default. This is to prevent anaesthetic and operation records being created outside of the typical Flowsheet or Anaesthetic Summary workflows.
- The EPR chart 'Anaesthetic and Operations This Episode' still has the 'New' button, but is only available to limited security groups.
- The Laboratory Chart will only display if there are laboratory items in any episode for the patient.

2.2. Appointments

- MDT – No message displays if a session is created outside of schedule
  - Once Details on the Events Time Page [RBEventTimes.Edit1] have been entered and user clicks on Update [Update1], the Event Booking Validation Results screen will display next. For Sessions generated outside of the schedule, the following message will display 'Schedule does not exist'. The Message will display against the Reason Booking Failed column.
- MDT – Meetings Create for New Patient
  - Added Patient & Book Appointment previously only supported adding existing patients as part of the workflow when adding attendees to an Event Session.
  - Enhancement made to now support registration of new patients as part of the workflow initiated when Add Patient and Add Appointment button is used on component RBEventSessPatient.List.
- Appointment Outcome Filter on Appointment Workbench
  - New Look Up field 'Outcome' added to the Appointment Workbench.
  - New index added to RBAppointment & RBApptOutcome for the Appointment Outcome to be saved and to speed up the search query.
  - New conversion routine created to populate the index.
  - Above changes optimize the utility of the Appointment Workbench as user can now search based on Appointment Outcome added for the appointment via Single Patient Outcome and Outcome entered on RBAppointment.Edit.
- Changed logic Creating Episodes when booking multiple appointments and one appointment is for an inpatient
  - The booking of multiple services in Flexibook where there is a single booking session should:
    - Create an inpatient (IP) episode per IP appointment booked (existing functionality)
    - Apply the conditions for auto-creation of episodes for all OP appointments. This means no attachment of additional services to the IP episodes created above.
- Bed to be mutually exclusive to Room rather than Clinic field
  - The Ward/Bed is now mutually exclusive with the Room instead of Clinic field.

- HL7 messaging for cancelling and reinstating block slots upon generation of new schedule
  - If a new effective date is added to a resource and it overlaps the previous date, an SIU_S23 cancelling the blocked slots will be sent. In addition, if that effective date is then removed, and the slots reinstated, an SIU_S24 will be sent to unblock the affected slots.
- Performance Improvements Appointment (Flexibook) screen
  - In order to improve performance, the Flexibook Tabs will now be displayed for every resource with a generated schedule regardless of the 'Not Available' information.
- Visual cue to help identify booking capacity for Care Providers/Resources
  - A visual indicator will now display on the 'FlexiBook' diary screen/list that will give the user the ability to be able to view quickly the approximate capacity of booked appointments against each individual session for a Care Provider or Resource by a visual cue within a column called 'Booked Appt %'.

    1. The visual cue will display in a bar format and will display the capacity of booked appointments per session in green.

    2. If the session capacity is at 90%, the bar will display in red.

    3. A tool tip will also give the percentage total.

    NOTE: sites will have the ability to modify colors for the visual cue through the Style Sheet (websys.css).
- Appointment Outcome Filter on Appointment Workbench
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  - New conversion routine created to populate the index.
  - Above changes optimize the utility of the Appointment Workbench as user can now search based on Appointment Outcome added for the appointment via Single Patient Outcome and Outcome entered on RBAppointment.Edit.

2.3. Care Plan, Clinical Pathways

- On NCP Wizard, the NCP tool to launch after Start Plan
  - Once the nursing care plan is created using the NCP Wizard, selecting the 'Start Plan' button opens the NCP Tool, which allows the nurse to directly work on the plan.
- NCP Wizard – Add toggle to filter out Medical Problems from Nursing Problems
  - In the Nursing Care Plan Wizard – Problem Identification section:
    - The 'Active Problems' have been separated into 'Active Nursing Problems' and 'Active Medical Problems' accordions. They are both expanded by default.
    - The label for 'Suggested Problems' has been renamed 'Suggested Nursing Problems' since it only displays nursing problems.
    - The 'Add' lookup caption has been renamed to 'Add Nursing Problems' since the lookup only displays nursing problems.
- Changes of Nursing Activity Schedule do not affect corresponding order
  - New behavior: after an order is placed for an Activity in a Nursing Care Plan, the order item defaults will no longer be editable from the NCP. From the Activities screen of the NCP Wizard, the user will still be able to open the order item

defaults for the activity, but will not be able to update them (consistent with Clinical Pathways functionality). Furthermore, the NCP Tool will display the order line for the activity in the Activities list.

- Complexity Level ownership updated
  - The Complexity Level code table entries can now also be defined per the customers
- Removed link from SSUser.Edit
  - According to the TrakCare reference material – the 'Payor Defaults in Registration' hyperlink should not be used.
  - The 'Payor Defaults in Registration' hyperlink should be removed from SSUser.Edit.
- Accreditation code table ownership updated
  - The Accreditation code table ownership entries can now also be defined per the customers.

2.4. EPR

- Refined Laboratory and Radiology Chart descriptions
  - In the EPR Radiology and Laboratory 'Unresulted Lab & Unresulted Rad' Chart item, the Order Item profile for discontinued orders has been renamed to display as 'Discontinued Radiology Orders' and 'Discontinued Laboratory Orders'.
- Refined 'Discontinued Medications' description
  - 'Discontinued Medications' description updated to 'Discontinued/Executed Medications' on epr.CTProfileParamsItem.Edit component.
- Chartbooks and charts clean-up – removed unrequired charts and chartbooks
- New Specialized Patient Summary to be used against the access profiles in TCUI and MEUI. This includes but is not limited to: Cardiology, Oncology, Maternity, Outpatient Nursing, Emergency, Ophthalmology.

2.5. Graphing

- Support Admixtures in EPR Graphs
  - Changed the logic for graph items defined as generics, to accommodate admixture. Can now display the order items linked to admixtures either ad hoc or recipe.
    The logic also supports if the item defined in the graph was:
    - The main admixture ingredient
    - Additive
    - Solvent
  - Fixed the logic of displaying the drug delivery rate values for continuous infusions either admixtures and non-admixtures.
    - The logic will depend on the drug delivery calculation method (/min, /hour, /kg/min, etc.)
    - If the UOM used for prescribing is different from the UOM defined in the graph, the system will do the conversion based on the dose equivalent set-up.
  - Suspended infusions now show with zero value.
  - Fixed issues with the graph tool tip (not displaying the trailing zero and the calculation of the values).

2.6. Interfaces

- HL7 messaging for cancelling and reinstating block slots upon generation of new schedule
  - If a new effective date is added to a resource and it overlaps the previous date, an SIU_S23 cancelling the blocked slots will be sent. In addition, if that effective date is then removed, and the slots reinstated, an SIU_S24 will be sent to unblock the affected slots.

2.7. Maternity

- Copied Baby Birth Measurements to relevant Observation Items
  - This development also enhances the existing functionality by creating a persistent link between the baby birth measurements and the corresponding observation items. Edits made to these values on the birth record are now reflected in observations via this link.
- Display Birth Number in relation to Birth Plurality
  - Column captions for Baby Number modified on PAPregDelBaby.List to Birth Number.
  - Caption for Baby/Fetus Number modified on PAPregDelBaby.EditOther to Past Birth Number.
  - Caption for Baby Number modified on PAPregDelBaby.EditFull1 and PAPregDelBaby.EditFull2 to Birth Number.
  - Column caption for Baby/Fetus Number modified on PAPregDelBaby.ListOther to Past Birth Number.
- Age when baby dies to be documented for past pregnancies
  - Capability to document the death details of a past baby (PAPregDelBaby. EditOther) > Baby Alive(BABYAlive):
    - Changed the existing 'Baby Alive' checkbox to a lookup pointing to the standard type Yes/No/Unknown
    - A conversion routine has been written for existing/historical data to be retained. It will convert the data in the 'Baby Alive' checkbox into Yes/No/ Unknown standard type based on the correlation between the data in the 'Baby Alive' checkbox, outcome type of the baby, and data in the 'Reason for Death' field
    - When the outcome type of a baby is stillbirth, TrakCare will automatically select 'No' for the 'Baby Alive' lookup field and auto-populate '0 Days' as age of death
    - When documenting an alive baby, TrakCare will disable/not display the unrelated fields accordingly.
- Do not display Current Gestation in Patient Banner if there is no data.
  - The caption and value for Current Gestation will only display in the patient banner when there is current/valid data, specifically when there is there is a current open pregnancy without a baby birth record.
  - The function is dependent on the banner layout including only the value field without the caption, and is the equivalent to that developed for Corrected Gestation and Corrected Age.
  - The dynamic display of the caption in the banner reduces the overhead and maintenance associated with multiple contextual layouts of the patient banner.

- Changed description of observation item lookup value 'Update Position – Fetus 1, 2 and 3'
  - TC.MAT-FP1 – description of look-up value corrected from RMT – 'Left Mentum Transverse' to RMT – 'Right Mentum Transverse'.
- Display Birth Number in relation to Birth Plurality
  - PAPregDelBaby.List > Birth Plurality (new column) PAPregDelBaby.ListOther > Birth Plurality (new column).
  - Column captions for Baby Number modified on PAPregDelBaby.List to Birth Number.
  - Caption for Baby/Fetus Number modified on PAPregDelBaby.EditOther to Past Birth Number.
  - Caption for Baby Number modified on PAPregDelBaby.EditFull1 and PAPregDelBaby.EditFull2 to Birth Number.
  - Column caption for Baby/Fetus Number modified on PAPregDelBaby.ListOther to Past Birth Number.

2.8. Medication Administration

- Support nurse manufacture of PAC admixtures
  - Logic changed to enable nurse manufacturing workflow for the PCA admixture.
  - That is, web.OEOrdExecAdmix:AdmixNodeNeedsManufacture originally included a check for ivType. This has now been removed.
- Second signature rules enhancements for administration
  - As part of this project, the description of second signature related fields is now unified to Second Signature. All the fields previously named 'Overseer', 'Witness', 'Double Signature', 'Counter Signature' are now renamed. Translations should be reviewed for these functionalities.
- Calculation discrepancy when using decimals in fluid balance observation items
  - Manually entered fluid balance will no longer be rounded by TrakCare in the clinical profile or fluid balance. The admin volume recorded by the user at administration time is considered as manually entered and will not be rounded.
  - The system-calculated values, either totals or generated by the fluid balance routine, will be rounded based on the configuration of the system parameter: System-> Significant figures for calculations. If the parameter is not set, the default is 4 significant digits.
- Consolidated administration block logic for Administration screens
  - Consolidated the logic behind the administration node not available for administration. Use the same system logic across all administration access points in both MEUI and TCUI.
  - On OEOrdExec.Multiple.Edit, the 'Reason Not Editable' column has been renamed to 'Reason(s) for Restriction'.
  - When using the TC.CF.Order Administer Manufacture workflow, the Admixture Manufacture screen is disabled from Clinical Profile but enabled when access elsewhere. This will now be disabled similar to when accessed from clinical profile.
  - The Reason Not Editable now displays all reasons for restriction, not just one if more than one. That is, the prepare screen now displays all the blocking reasons for a certain administration node.

- The multi-administration screen now uses the same logic and uses a new column 'Reason(s) for Restriction' to display all the related reasons, and the whole will be disabled.

- Standardized captions for medication administration deferment
  - Changed column caption on nurse worklist to 'Reason Deferred'.
  - Changed reason text box caption on multiple administration to 'Reason for Deferral'.
- Display Ongoing Orders in the Clinical Profile after the node generation period
  - Orders with ongoing or event duration type will now show in the clinical profile even after the administration node generation period.
- Calculation discrepancy when using decimals in fluid balance observation items.
- The system calculated values either totals or generated by the fluid balance routine, will be rounded based on the configuration of the system parameter: System-> Significant figures for calculations. If the parameter is not set the default is 4 significant digits.

Other	Customers should configure the system parameter System → Significant Figures for Calculations to a value matching the hospital practice. The parameter allows values from 3-18. If kept blank the system will default the value to 4 in the related calculations.

2.9. Observations

- Reinstated (Undeprecated) MRObservationsOrder.EditList and MRObservations.EditList→MRObsOrder
  - MRObservationsOrder.EditList to no longer be deprecated.
    It is required to display observations from the hourly routine runOrderIVCreateObservation^COEOrderObservation.
  - MRObservations.EditList to no longer be deprecated.
- Updated observation item description from 'Patient Dependency Ratio' to 'Patient Dependency Ratio (nurse : patient)'
  - For the data to be captured and unambiguously represented, the observation description to be updated from 'Patient Dependency Ratio' to be 'Patient Dependency Ratio (nurse : patient)'.
- Changed ambiguous label for observation item TC.AAC
  - Observation item TC.AAC description changed to 'Tube tip to carina distance'.
  - TC.AAC purpose changed to 'To record the distance between the tip of the tracheal tube or tracheostomy tube and the carina'.
- Changed description of observation item lookup value 'Update Position – Fetus 1, 2 and 3'
  - TC.MAT-FP1 – Description of lookup value corrected from RMT – 'Left Mentum Transverse' to RMT – 'Right Mentum Transverse'.

2.10. Operating Theatre

- Book OT before Pre Admission/TCI
  - Ability to Link OT Booking to Existing Admission or Pre Admission
    - When linked to current admission wait list, booking will be created in the background and not presented to user. Admission Date and Admission Time on the wait list booking will be disabled so that it cannot be changed by user. The Admission Date and Time populated on the auto-created wait list booking will be as per the current admission

    - New system parameter under the WL Node -> Link OT Booking to Existing Admission/Pre-Admission. The Parameter is in addition to the OT parameter that currently exists when OT booking is being made from Wait List.
- Task Worklist menu/workflow added to Menu Header Operating Theatre/TC.OT. Menu Header Operating Theatre.

2.11. Orders

- Order Notes and Processing Notes in Clinical Profile for Laboratory Orders
  - Order Notes and Processing Notes entered as part of laboratory orders are now displayed in the clinical profile beneath the order line.
- Display additional STAT order as new order above the parent order within the order cart
  - Addresses the issue that the visual change in the STAT icon from a cross to a tick may not be obvious to all users.
  - When a STAT dose is added using the STAT icon in the Order Cart, a STAT order is now visually displayed above the parent order within the Order Cart.
- Incomplete Orders – Retain Order Status Details and Inform User that Dosing Model will Reset
  - This development ensures the order status of an incomplete order is retained when the user returns to the order. It also ensures the user is notified about the need to re-enter dosing model details that could not be retrieved.
- Removed Order from Sequence Plan and effect on Ordering Cart
  - When an order placed in a sequence plan is removed from the plan, either during review of the sequence plan at order entry or when editing the plan post-order, a confirmation dialog is launched reminding the user that the action only unlinks the order from the plan and does not remove it or alter its timing. Neither the order start time nor the administration times for a medication are altered by the removal of the order from the plan. The user can alter manually in a separate action.
- Changed Repeat From Order Profile to Reorder from Order Profile
  - 'Repeat from Order Profile' has been changed to the phrase 'Reorder from Order Profile' to be consistent with the renaming of 'Repeat' to 'Reorder'
- Alerts should not be pre-selected when Batch Overriding
  - No alerts are preselected and there is no select all option available. Alerts now have to be selected individually to ensure the prescriber has taken the time to acknowledge each of them.
- Warn when Discontinuing an Order in a Sequence Plan
  - When an order of any type is discontinued via either the Change Status menu, the Discontinue menu, or (in ME UI) the action menu quick Discontinue, TrakCare will check for other orders that are downstream of the order in a sequence plan and if present, now warn the clinician of their presence.
- Re-position Stock Item Location List to Top of Order Screen
  - Stock Location List (LocList) field relocated to top section of Medication Order details screen (OEOrder.RX) for quick access during ordering process.
- Edited Menus and Worklist for Managing Porters
  - Menu 'CF.Order List' captioned to 'Porter Request'.
  - Menu 'TC.CF.Complete (Orders)' captioned to 'Completed Porter Requests'.
  - Menu 'Execute (Orders)' captioned to 'Execute Porter Requests'.

- Worklist 'TC.PS.OrdersList' filtered by the order category of 'Transport'.
- Title of the layouts for these menus updated:
  - 'Patient Transport Services Request' to 'Patient Porter Request'
  - 'Patient Transport Services Completed' to 'Patient Porter Requests Completed'.

2.12. Patient Administration

- No Known Allergy Icon after Merging Patients
  - When the 'No known Allergies' allergy status is 'To Be Confirmed', 'No known Allergies" icon will no longer displayed.
- Refined Translated Labels on Config Emergency Episode Component for Triage First Context
  - Accordion title updated from 'Payor' (no captions) to 'Payor Details' (with captions).
  - Accordion title updated from 'Audit Details' to 'Allergies and Alerts' (with captions).
  - Accordion title updated from 'Transfer Patient/Coming Ambulance Details' to 'Seen' (with captions).
  - Accordion title updated from 'Care Provider Details' to 'Deceased' (with captions).
  - Accordion title updated from 'Referral' to 'Referral Details' (with captions).
- Patient keyword logic to include PAPER_Name4, PAPER_Name5, PAPER_Name6, PAPER_Name7, PAPER_Name8
  - Changes in patient keyword logic to include PAPER_Name4, PAPER_Name5, PAPER_Name6, PAPER_Name7, PAPER_Name8 in patient keywords.
  - **NOTE:** When system parameter 'Search for Patients by Any Part of the Name' is selected.
- OP Triage Menu required for OP Attendee Functionality
  - Full OP Attendee functionality now available.
- Created Transaction Indices for Consultant and Emergency Consultant
  - Added indices TRANSEmergConsultantDR and TRANSConsultantDR to User.PAAdmTransaction2, and added lines to (web.PAAdmTransaction). UpdateBitmapIndex() to update these 2 indices as well.

2.13. Patient Billing

- Patient Episode Deposit Workflow to keep patient in context
  - Patient Deposit workflow amended.
    - If an episode is in focus and the patient deposit menu is selected, the episode id will be passed in, the deposit screen will be displayed; the deposit created will be linked to the episode
    - If the patient is in focus and the patient deposit menu is selected, the patient id will be passed in, the episode list for the patient will be displayed; the user can continue with the deposit workflow
    - If no patient or episode is in focus and the patient deposit menu is selected, the no patient id or episode id will be passed in, the patient find screen will be displayed; the user can continue with the deposit workflow.

  - Menu: Pt Episode Deposit (TC.PB.Cashiers.Deposit), Javascript Function has been updated to 'PassDetails'.
  - Workflow: TC.PB.Cashiers (Deposit) transition and conditional expressions have been updated.
- Updated the Requested Qty in the Approval Workbench upon changing the Qty to dispensed (Base UOM)
  - Payor Approval: After the Payor Approval Request has been created, if the quantity of the order is amended, and the Payor Approval Request has not been approved, the quantity on the Payor Approval Requested will be updated.
- Supervisor Balance Reason
  - Cashier Workbench: the field 'Supervisor Balance Reason' now becomes mandatory if there a difference between 'Cash Total' and 'Amount Received'. Triggered when selecting 'Supervisor Close'.
- Payment Reference Processing – Deposit Invoice Allocation Amount
  - Changes in display of Total Activity RA Payment amount to display amount Claim RA Reference Amount [PAYMREFClaimRARefAmount] from the relevant 'Invoice Payment Reference' [ARPatBillPaymRef.FindList] component. Fix in batch receipting when invoice is assigned to multiple payment references with multiple deposits.
  - That is, Batch Receipting – Payment Reference: When processing multiple Payment References for the same invoice, the amount allocated to the invoice will be as per Invoice Remittance Advice Payment Amount.
- Net Price Calculation in Approval Workbench
  - Payor Approval: When a Payment Discount is to be applied and Payor Discount Only is selected, in the Payor Approval Request, the item net price is the Gross Price-Discount.
- HDU Incremental Surcharge to replicate ICU Incremental Surcharge Setup
  - Standard Billing:
    - The hard coding (Room Type must be 'ICU') of billing for an ICU Room by minutes has been removed; a field has been added to the Room Type Code called 'Bill By Minutes', (tick box) has been added
    - If selected, the accommodation for the Room Type can be billed by minutes; allowing for different Room Types, for example a High Dependency Room, to be billed by minutes.

2.14. Pharmacy and Stock

- Support Nurse Manufacture of PAC Admixtures
  - Logic changed to enable nurse manufacturing workflow for the PCA admixture.
  - That is, web.OEOrdExecAdmix:AdmixNodeNeedsManufacture originally included a check for ivType. This has now been removed.
- Removed the PHCScheduledDrugClass from MIMS Indonesia and Thailand Conversion
  - Drug Upload MIMS file conversion now excludes the Scheduled Drug Class file for MIMS Thailand and MIMS Indonesia Conversions.
- Bulk update of Stock Item links to Locations
  - A new menu 'Stock Location Workbench' is now available. This workbench will allow users to access to this menu to make a bulk update to the links between stock items and locations across multiple hospitals.

- Enhanced Logic for Import Order Items with different Prescribing Levels during Medication Reconciliation
  - The system logic to import medication history from previous episodes is now customized based on the imported order DMD level.
- Removed First Dose from Ordering Chart for Outpatient and Discharge Orders.
  - First Dose information on ordering cart is no longer shown for episode types of outpatients or any orders with a priority of Discharge as not relevant because the administration will often occur outside the hospital and will not follow dispensing times.
- Solvent Main Intermittent/Push Admixtures: Validation to ensure Order Volume is not exceeded in Pharmacy Manufacturing
  - For Solvent main admixtures, ordered at any DMD level, at the time of pharmacy manufacturing the following check and logic is applied.
    - Is dose ordered equal to the Total container volume in manufacture?
      - If yes, one may proceed to manufacture. No code change required.
      - If not, Start and Prepare Buttons are disabled and a translatable label is displayed in the red font on the Manufacture.Edit layout: 'Review the solvent volume (Resolving or Volume Calculator) so it equals the dose ordered'.
- Changed the description of the AdmixTypeStandardTypeItems to replace IV
  - The Standard Type, AdmixType, was previously used to identify admixtures as either 'IV' or 'Non-IV'. In order to more accurately reflect their purpose, the descriptions of the AdmixTypes have been edited from 'IV' and 'Non-IV' to 'Injectable' and 'Non-injectable'.

2.15. Prescribing

- Removed unsupported Order Priorities
  - In earlier TrakCare versions some order priorities were replaced with other fields:
    - PRN --> PRN checkbox
    - Patient's Own --> Dispense Type lookup
    - External Pharmacy --> Dispense Type lookup.
  - End-dated the following order priorities:
    - PRN
    - Patient Own
    - External Pharmacy.
- Dose Based Order Items in combination with Transdermal Patch Type Routes are forced down to Strength Form Level
  - Medications linked to Transdermal administration route (Linked to Transdermal context) will be forced to Strength form if no business rule was defined.
- Admixture Order Line – Remove Strength of Unmixed Additives
  - When a multi-additive admixture medication order is displayed in the order line, the undiluted strength of the main additive is no longer displayed in the order line so it will not be mistaken for the final concentration of the ingredient in the admixture.

- Re-caption field from Quantity Administered to Quantity Billed
  - The field 'Quantity Administered' has been re-captioned to 'Quantity Billed' to avoid misinterpretation and more accurately reflect the billing functionality related to this field.
- Incomplete Orders – Retain Order Status Details and Inform User that Dosing Model will Reset
  - This development ensures the order status of an incomplete order is retained when the user returns back to the order. It also ensures the user is notified about the need to re-enter dosing model details that could not be retrieved.
- Changed descriptions of IV Type to Infusion Type
  - 'IV' in IVType is being used as a synonym for infusion. For clarity, there has been a change of description from 'Administration Route IV Type' in PHCAdministrationRoute.Edit to 'Administration Route Infusion Type'.
- Changed Repeat From Order Profile to Reorder from Order Profile
  - 'Repeat from Order Profile' has been changed to the phrase 'Reorder from Order Profile' to be consistent with the renaming of 'Repeat' to 'Reorder'.
- Alerts should not be pre-selected when Batch Overriding
  - No alerts are preselected and there is no select all option available. Alerts now have to be selected individually to ensure the prescriber has taken the time to acknowledge each of them.
- Modification of Custom Frequency in Existing Prescriptions
  - In order to minimize situations where the modification of custom frequencies causes new administration nodes to be scheduled too close to previous administrations, **new system logic** has been put in place:
    - When medication orders with custom frequencies are modified to have new custom frequencies, the timing of the new administration nodes will be calculated starting from the most recent overdue administration node moving forward. As the default behavior, nodes prior to the most recent overdue node will not be altered
    - In situations where there are no overdue nodes, or where the most recent node has been administered, new nodes will be scheduled in the future based on the last documented time of administration
    - Nodes prior to the documented administration will remain unaltered.
- Restricted access to Dosing Model when Dose, Frequency or Duration are Empty
  - If the frequency or duration are blank, Dosing Model can be accessed, despite the inability to create a valid set of nodes. This causes confusion for users and results in invalid dosing models. This feature addresses this by no longer allowing access to Dosing Model if any of the fields Dose, Dose UOM, frequency, or duration are blank. If user clicks the Dosing Model link in such a scenario, message to be displayed 'Dose, Dose UOM, Frequency, and Duration must not be blank in order to create a Dosing Model'.
- Cleared incompatible frequencies when an item is continued in Discharge Reconciliation or Reordered as Discharge
  - When an order with a STAT or Once Only priority is reordered as discharge, the system will clear the frequency field as it is not compatible with discharge priority. The same will occur when the order is continued from medication reconciliation.

- Disabled Update Alerts and Cancel Items Buttons when no Alert/s selected
  - When Update Alerts or Cancel buttons are selected when attempting to override alerts, a warning is presented to the user if no alerts have been selected.
- Blocked PCA and Trans-dermal Patch Orders from Inclusion in Sequence Plan
  - Patient-controlled analgesia (PCA) and Transdermal patch medication orders are not currently supported for inclusion in a sequence plan and now will be blocked from being configured as such to prevent errors on order.

2.16. Resource Schedule

- Diary View component (RBAppointment.LocationRescSchedNextPrev) – 'ActiveOnly' flag to be enabled by default
  - [ActiveOnly] flag marked as on in the component layout 'RBAppointment. LocationRescSchedNextPrev' for all the contexts:
    - Trak.OT Planner With List
    - Trak.OT Planner
    - TC.CF.OT.Planner
    - Also for the component without context.

2.17. Workbenches, Tasks

- Tasks created based on Frequency and Duration Functionality
  - **NOTE:** This only affects customers that have these fields displayed on the Task Edit Page.
  - Changes on epr.TaskList – Class
    - When saving Multiple objects, loops through tasks first, then assign care providers and patients
    - Calculation for the Start Date has been corrected
    - On Object save, now correctly retrieves the frequency
    - Group Task checkbox, multiple users, and multiple patients work with frequency and duration.

2.18. TrakCare Laboratory Enterprise (TCLE)

2.18.1. Laboratory

- Consistent display of Results in Cumulative Mode in Doctors Reports
  - Changed logic on AddTestSet so normal result will be reported regardless if there is Cumulative Report Group set up on Test Set.
- Instrument Exceptions: Hide QC columns completely
  - Adjusted the query web.LBInstrumentTest:Find to not show any QC column if Hide QC is selected.
  - Renamed hide QC values to 'Hide QC'.
- Complexity Level ownership updated
  - The Complexity Level code table entries can now also be defined per the customers.
- Accreditation code table ownership updated
  - The Accreditation code table entries can now also be defined per the customers.

- Modifications to Test Set Send Away functionality
  - A modification has been made to the specimen configuration 'Reusable' property. Previously this allowed for just a 'Yes/No' value. This development extends that to allow the reusable property to be restricted to use within the same department. The ''Send Away' functionality for test set processing has also been extended. It is now possible to configure the send away logic to mandate that a separate/ distinct specimen be collected.
  - Data Conversion: At upgrade, all specimen collections that did not have the 'Reusable' checkbox checked are set to be 'Not Reusable'. For those collections where the checkbox is checked, the reusable property is set to 'Reusable'.
- Renamed the Hide Unlinked Results filter to Hide Unregistered Results
  - The Hide Unregistered Results checkbox caption on the Instrument Results Menu (LBInstrumentTest.List) has now been changed to Hide Unregistered Results. The change in name reflects the actual functionality of the filter.
- Converted the Instrument Result Grid to an Instrument Exceptions Grid
  - The instrument grid was originally intended to allow users to detect trends in results as they are received from an instrument. However, due to the large volume of results stored on the grid, it became necessary to remove the results from the grid when certain scenarios had been met.
- Changed the name of the menu to instrument exceptions
  - There has been a new standard type of 'LabReasonHeldOnInstrumentGrid' and the actual reason for each held test item can be viewed by clicking on the test item result. The grid also allows filtering of the displayed results by reason for hold.
- Improved Auto Authorisation
  - Changed the functionality of the Enable Range Checks feature
  - When a test set item has auto ranges configured, these will become an extension of the reference ranges.
- Changes to the Purge Functionality on the Instrument Grid
  - The default purge period configuration should be removed from all aspects of the product.
  - Introduction of a select all checkbox to the instrument grid screen to facilitate the ability to purge multiple results at a time.
- Changed labels from Reference Range to Normal Values
  - A large number of fields and list headers/ reports/ EPR displays refer to reference range. The term reference range is not appropriate when displaying a non-range value (e.g., Negative).
  - To address this, a number of components have been modified to indicate Normal Values rather than Ranges as a header or caption. This is to support non-numeric normal values (e.g., Negative) for certain test results and observations.

2.18.2. Transfusion Medicine

- Unable to perform Group Specific issue with current confirmed blood group
  - The lab site specific transfusion medicine parameters attribute of 'Enforce Emergency Issue of Crossmatch products if no Suitable Sample available' has been changed to 'Enforce Emergency Issue of Crossmatch products if no Confirmed Group on sample'.

2.19. Clinicians

- Ability to assign a Clinician to a Referral Order and show on Workbench View
  - Radiology Workbench has a new search parameter 'Authorising Clinician'. This will allow the user flexibility and visibility to manage patient orders and referrals. that have a value entered into the 'Authorising Clinician' field on the Order Screen.

2.20. Episode Administration

- New Menu for Current IP Episodes
  - The new menu and associated worklist TC.IP.CurrentInpatients^CurrentInpatients + TC.IP.Current Patient List has been configured and added to the menu Library PAS IP menu header.
  - This worklist has a default preference to show current inpatient episodes, the preferences can then be modified at the application level to restrict the search / display to specific wards and or care providers.

2.21. Waiting List

- RTT Workbench created
  - Added RTT Workbench under Waiting List Library.

The following provides a synopsis of the changes by system area that are not backward compatible. Consequently, some configuration will be required **POST** Upgrade but **BEFORE Go Live** to ensure minimal disruption to business processes.

3. Non-backward-compatible Items

3.1. Maternity

- Age when baby dies to be documented for Past Pregnancies
  - Capability to document the death details of a past baby (PAPregDelBaby. EditOther) > Baby Alive (BABYAlive):
    - Change the existing Baby Alive checkbox to a lookup pointing to the standard type Yes/No/Unknown
    - A conversion routine has been written for existing/historical data to be retained. It will convert the data in the 'Baby Alive' checkbox into Yes/No/Unknown standard type based on the correlation between the data in the 'Baby Alive' checkbox, outcome type of the baby, and data in the 'Reason for Death' field
    - When the outcome type of a baby is stillbirth, TrakCare will automatically select 'No' for the 'Baby Alive' lookup field and auto-populate '0' Days' as age of death
    - When documenting an alive baby, TrakCare will disable/not display the unrelated fields accordingly.

3.2. Medication Administration and Prescribing

- Ability to mark an Administration Node as Deferred
  - Deferring from the administration workflow decision screen is not supported in TCUI.

3.3. TrakCare Mobile Enabled User Interface (MEUI)

We listen to our customers and their feedback regarding usability; the evolution of TrakCare User Interface (TCUI) reflects this. First to market with full web-based EMR, and now an enterprise solution with responsive web design.

3.4. TrakCare User Interface (TCUI)

Orders

- Rehab Medicine (RM) Order Type access to Dosing Model
  - Nursing (Rehab Medicine) orders that need to be repeated at certain intervals for a length of time can be given a frequency and duration similar to a medication order. Sometimes the exact timing of the tasks performed for the order needs to be tailored to coordinate with other aspects of the patient's care, such as lab testing or medication dosing. To facilitate this timing, and better align nursing tasks with other tasks, a number of changes around setting frequency, duration and task timing have been made. Support for use of a custom frequency has been added to nursing orders. The duration field previously used on nursing orders has been replaced with the same more flexible duration field set used for medications, supporting fixed durations (duration types of 'for' and 'until'), and allowing for specifying a duration value and unit separately. The dosing model used by medications to tailor task timing has been extended to nursing orders as a replacement for the previous variable order days functionality.

Description	The variable order days functionality that used to support customization of the timing of nursing orders has been deprecated	The original Order frequency (mins) has been converted to a hidden field	The original nursing duration field has been deprecated
Component			
Component Type			
Notes	On OEOrder.RM component, Variable Order Days (VarOrdDays) and Change Dispensing Time (ChangeDT) links have been removed from the layout	On OEOrder.RM component, Order frequency (mins) will be hidden but will store any entered custom frequency (ITM2Free TextFreqValue/Unit) converted to minutes to maintain backwards compatibility	On OEOrder.RM component, Duration (RMDuration) remains on the layout to maintain backwards compatibility with older order entry versions but is hidden when launched from OEOrder.Entry.
Replaced By	Dosing model link	New custom frequency field set	New duration field set

4. Deprecated Items

A deprecated item is an item that exists in the product and is supported for backwards compatibility, but the functionality of which has been replaced, superseded or become redundant by an improved mechanism or change in technology.

Purpose:

- To notify through the use of documentation and tools that an implemented item has been deprecated and identify the preferred mechanism to achieve the same or superior behavior
- To notify in advance that deprecated items may be deleted in future releases
- To indicate that further development of the deprecated items will not occur
- Allow TrakCare implementations and clients a window of opportunity to migrate from deprecated item to new preferred item(s)

4.1. Code Table

- Remove Link from SSUser.Edit
  - According to the TrakCare Reference material, the 'Payor Defaults in Registration' hyperlink should not be used.
  - The 'Payor Defaults in Registration' hyperlink should be removed from SSUser.Edit.
- Refresh the Classification Browser Tree after adding or deleting members
  - Upon update or deletion of Items in Member Management, the group contents are refreshed to reflect the modifications. This includes actions from the 'Add to Group' button and 'Remove from Group' buttons.

4.2. TrakCare Laboratory Enterprise (TCLE)

- Enhancements to Test Set Linking Functionality
  - The Same Patient checkbox configuration option has been deprecated from Code Table > Test Set > Linking > Test Set Linking component (LBTestSetRevisionLinking.Edit) as any Test Set linking performed is always against the same patient.
- Deprecated the SNOMED-CT Analysis Dashboard
  - The current version of the SNOMED-CT Analysis Dashboard is no longer available in the Clinical Analytics menu.
- Deprecated unused fields – LBVerificationQueue.Edit
  - Marked the external interface fields no longer relevant to LBVerificationQueue. Edit as deprecated.
  - The following fields for Test Set Options > Refer results (LBVerificationQueue. Edit) have been deprecated as the external interface functionality has moved to Episode Reporting / EDI (LBEpisode.ReportEDI) against the Lab Episode:
    - External Interface Queue
    - Care Provider
    - Location
    - Referring Doctor
    - Third Party
    - Copies

        - Current External Interface Queues
        - Delete Current External Interface Queue(s)
        - Add
        - Add External Interface Queues
        - Delete Added External Interface Queue(s).
- Improving Auto Authorisation
    - Test set auto authorisation configuration has been changed.
    - The Enable Auto Ranges checkbox has been removed from the Autoauthorisation code table.
    - A description has been added to the layout next to the Enable Range Checks fields, to explain that auto ranges take priority over reference ranges when so configured.
- Test Set Column added to the layout
    - The test set column has been added to the layout for the following menus
        - Specimen Collection/ Receive- LBSpecimenReceive.Edit
        - Lab Pre Registration- LBRapidRequest.Edit
        - Lab Specimen Reception- LBRequest.SpecimenContainer.Receive.Edit
        - Lab Registration-BEpisode.Edit.
- Modifications to Test Set Send Away functionality
    - A modification has been made to the specimen configuration 'Reusable' property. Previously this allowed for just a 'Yes/No' value. This development extends that to allow the reusable property to be restricted to use within the same department, The 'Send Away' functionality for test set processing has also been extended. It is now possible to configure the send away logic to mandate a separate/distinct specimen is collected.
    - Data Conversion: At upgrade, all specimen collections that did not have the 'Reusable' checkbox checked are set to be 'Not Reusable'. For those collections where the checkbox is checked, the reusable property is set to 'Reusable'. s
- Improving Auto Authorisation
    - A Test Set may have both reference range and auto reference ranges configured. The current 'Enable Auto Ranges' check box has no functionality and may be misleading to users.
    - The Enable Auto Ranges checkbox has been removed from the Autoauthorisation code table.
    - This checkbox was not required as 'Auto Ranges' were always applied in any case.
    - No direct replacement required. However, informative caption added as described above.

4.3. Maternity

- Deprecated Delete for Pregnancy, Delivery and Babies
    - The Delete function was available on the following components: PAPregnancy.EditOther, PAPregDelBaby.EditOther, PAPregnancy.EditFull, PAPregDelivery.Edit, PAPregDelBaby.EditFull1.
    - Replaced with Entered in Error to Pregnancy, Delivery and Babies.
- The Delete function for previous and current pregnancies/deliveries/babies/placenta is deprecated

- This development deprecates the 'Delete' button on Maternity components in favor of the new Entered in Error Reason functionality, and removes the 'Delete' button from all layouts and models for maternity components.

- Pregnancy Dates on Waiting List and Episode
  - The following fields captions have been changed to improve field description:
    - On Waiting List entry screen (PAWaitingList.Edit), the following date field caption has changed from 'EDD Agreed Date' to 'Agreed EDD'
    - On Episode screen (PAAdm.Edit and PAAdm.EditEmergency), the 'Agreed EDD' field caption has changed to 'Open Pregnancy'.
- Copy Delivery Weights to EPR Chart
  - Delivery weights entered for newborns as part of Maternity workflows will now be copied to the baby's observation profile. This is limited to instances where newborn workflows progress to completion resulting in new episode creation for the baby.
- Deprecated Delete for Pregnancy, Delivery and Babies.
  - The Delete function was available on the following components: PAPregnancy.EditOther, PAPregDelBaby.EditOther, PAPregnancy.EditFull, PAPregDelivery.Edit, PAPregDelBaby.EditFull1.
  - Replaced with Entered in Error to Pregnancy, Delivery and Babies.

4.4. Medication Management and Prescribing

- Ability to mark an Administration Node as Deferred

Depreceated Components and Functions	
Description	Administer Later column
Component	Multiple Administration (OEOrdExec.Multiple.Edit)
Component Type	screen
Notes	Defer action has similar functionality to Administer Later in that it skips the administration from being marked addressed but now requires a Defer Reason and causes e Deferred label to appears against the administration.
Replaced By	Renamed to "Defer"' with additional functionality

- Deprecated Order Review Functionality
  - All components, component items, classes, menus and workflows related to Order Review have been deprecated. This is to be superseded by the Ongoing Orders project, which allows ongoing orders to be placed without an order review.
- Execute at point of ordering for pharmacy items
  - The Administer First Node feature is now opt in; the following must be done to activate it for an ordering workflow:
    - Enhancements have been made to the 'Order and Administer" functionality. Order and Administer functionality now requires the addition of a new 'Administer First Node' workflow item after order entry. The new workflow item is required for utilizing this functionality, and ensures that all orders are updated and stored before users are able to document an administration for their patients.
- Changed descriptions of IV Type to Infusion Type
  - 'IV' in IVType is being used as a synonym for infusion. For clarity, there has been a change of description from 'Administration Route IV Type' in PHCAdministrationRoute.Edit to 'Administration Route Infusion Type'.

- Order Administration Status of 'As per protocol' disabled when recording Dose Administrations
  - The ability to record 'As per protocol' as an administration status at the administration and multi-administration screen has been disabled because this option does not provide any further information about the administration.
- Removed IV from captions for Medication Administrations
  - The functionality for the administration of infusion can be used for different routes. Also, the same components can be used for oxygen administration and some functionality can be used for transdermal patches. Some captions have the term 'IV' which will be misleading and the user can interpret them to give a medication on a different route than prescribed.
  - Changed captions for:
    - Reverse Started IV menu 'TC.SC.OEOrdExec.Edit.Admin.ReverseStarted' to 'Reverse Started Administration'
    - New IV Administration Rate in 'OEOrdExecVolRateChange.Edit' to 'New Administration Rate'
    - IV Administration Set in 'OEOrdExec.Edit' and 'OEOrder.Rx' to 'Infusion Administration Set'.

4.5. Patient Registration

- The following components were replaced by PAPersonAllAlias.Edit and PAPersonAllAlias.List:
  - PAPersonAlias.Edit.
  - PAPersonAlias.List.
  - PAPersonSurnameAlias.Edit.
  - PAPersonSurnameAlias.List.

4.6. Stock

- Deprecated INTrans.List
  - 'Transactions' and 'Movements' screen report the same data.
  - Transactions component is deprecated. All future changes are developed only on the Movements screen.
  - The column 'Transaction' located on the Stock Item Inquiry screen (INCItm. List) has been deprecated.
  - Functionality and columns within the 'Stock Transaction Screen' have been moved to the Stock Master Movements [INCItm.Movements.List] screen.

4.7. Coding and Grouping

- DRG Coding Admission Weight New Fields
  - Addresses an issue where a single field was being used to document admission weights for medical coding while simultaneously being used to populate weights in clinical areas such as the patient banner.
  - Deprecated MRAADMWeight in PAAdm.DRGCoding and removed it from the layout.
  - A new, separate, coding admission weight field has been developed for use in coding workflows.

4.8. Appointments

- Renamed Resource Schedule MDT Functionality to MDT Clinic
  - Because the same terminology (MDT) is being used for 2 different functions in TrakCare, it creates confusion every time any of these 2 terms are discussed. Additionally, since the Priority Workbench has been used as the Home page for all care providers, the 'MDT' appointments tab can confuse customers into thinking that it is related to an MDT Meeting. To differentiate these 2 functions in TrakCare as well as in any documentation, we renamed the MDT functionality related to Resource schedule to MDT Clinic.

4.9. Bed and Ward Management

- Patient Banner display on Bed Request Change Status screen
  - Patient Banner will display on the Reject with Reason component screen when the Reject with Reason link is selected from the Bed Manager Summary list screen.

4.10. EPR

- Order Administration Status of 'As per protocol' disabled when recording Dose Administrations
  - The ability to record 'As per protocol' as an administration status at the administration and multi-administration screen has been disabled because this option does not provide any further information about the administration
- Changed Repeat From Order Profile to Reorder from Order Profile
  - 'Repeat from Order Profile' has been changed to the phrase 'Reorder from Order Profile' to be consistent with the renaming of 'Repeat' to 'Reorder'.
- Copy Delivery Weights to EPR Chart
  - Delivery weights entered for newborns as part of Maternity workflows will now be copied to the baby's observation profile. This is limited to instances where newborn workflows progress to completion resulting in new episode creation for the baby.
- Format changes to Time Headings in Clinical Timeline
  - In a clinical timeline, the time columns are displayed with super-headings and sub-headings that always provide a context to where in time the display is and display sufficient information appropriate to the time scale being viewed.
- Creation of Blood Type EPR Profile
  - A new Blood Type Profile has been generated, supporting in separate areas the current and the historical Blood Type entries.
  - The new EPR BTP Blood Type profile will substitute the legacy EPR Page EP Blood Type.
- Medication Review Deprecated
  - Medication review clinical profile item to be deprecated in (OEOrdItem.ListCytoEMR), no new button to be shown and the chart item to be hidden.
  - Medication review clinical profile item to be deprecated in the clinical profile preference (OEOrder.Edit.ClinicalProfile).
  - Review option should be hidden from item type look up in (epr.CTProfileParamsItem.Edit).
  - Succeeded by Pharmacy review as it is more comprehensive and more widely used.

4.11. Flowsheet

- Re-caption field from Quantity Administered to Quantity Billed.
  - The field 'Quantity Administered' has been re-captioned to 'Quantity Billed' to avoid misinterpretation and more accurately reflect the billing functionality related to this field.
- Flowsheet Grouping
  - The 'Select Flowsheet' lookup present on the Flowsheet screen (HDR.Custom) has been added to the layout. This field is only displayed when the Menu is configured with a Flowsheet Group.

4.12. Operating Theatre

- Reason for Delayed Start of an Adhoc OT Session should not be mandatory
  - Change in logic. When an OT session is created on the fly (ad hoc) when the session is edited (start or end time), the field 'Reason for Delayed Start' will only be a mandatory field on consideration of Actual Session Start Time and Schedule Start Time.

4.13. Graphing

- Correct EWS Ranges for Temperature Observations
  - Early Warning Score ranges for the temperature observation item have been updated to reflect the NEWS2 scoring system and eliminate gaps and precision issues.

4.14. Medical Records

- Created new menus and workflows to Medical Record Library
  - Medical Records Library now has all the required menus/workflows available to demonstrate the full Medical Records Tracking functionality.

4.15. Questionnaires

- Added the Score to the default Text Representation for Questionnaires
  - Score field is now included in the default Text Representation for Questionnaires in case it is present on the layout, immediately before the Status. The format is the same as for other questions: [Score(in bold): <Score>(in bold)].
- Questionnaires can now be assigned to multiple groups
  - This property is replaced by the data stored in User.SSUserDefWinGroupItems.
  - A conversion must be run, which will take the existing values for questionnaires 'Group' field, and insert as a new child item.
- Deprecated Questionnaire 'Control Group' fields
  - 'Control Group' fields were available from previous releases and would insert fields into the patient record based on fields added to the questionnaire. As the user has no knowledge of what or how this is occurring, the functionality is deemed to be misleading and hazardous.
  - The 'Control Group' fields have been deprecated from questionnaires, and the fields removed from generated layouts.
  - Existing questionnaires with this setup will still retain this functionality.

4.16. Reports

A standard JReports set is available and ready to use.

4.17. System

Visual Rules (Active Decision Support)

- Allow Visual Rules to send an SMS
  - Core TrakCare solution to SMS. Visual Rules will link to Ensemble production created in to send SMS messages.
- Access specific Help Text from a page in TrakCare
  - The F2 key does not launch the Help page that has been set up for a specific component when using the MEUI.
  - F2 deprecated and replaced via URL:
    - If local help text is created, the URL to these pages can be defined in configuration manager
    - If defined, a '?' icon will appear in the header of Mobile enabled UI
    - Clicking this icon will launch the Help page that has been set up for a specific component
    - Clicking away from the overlay will dismiss the help text.
    - **NOTE:** F2 for TCUI was deprecated many releases ago.
- Ability to Alter TrakCare Branding Favicon
  - Deprecated component websys.ResponsiveConfig.Edit, component items Logo & LogoAltText, and menu 'TC.SM.Toolbox.MobileEnabledConfiguration'. Replaced by a new field created in the 'User Interface' code table called 'Branding Icon Path'.
- Removed deprecated parameters from Security Group Setting.
  - Deprecated parameters removed from the layout. Fields include:
    - Accordion: Clinical and EPR, Field: Display Diagnosis and Procedures DRG
    - Accordion: Clinical and EPR, Field: Display Orders from Previous Episodes
    - Accordion: Clinical and EPR: Allow to Execute Order Outside Shift
    - Accordion: Orders and Results, Field: Discontinue Executed Orders
    - Accordion: Order and Results: Allow to Discontinue Order for Packed Prescriptions
    - Accordion: Restrictions TTT: Favourite Stock
    - Allow to Execute Order Outside Shift
    - Favourite Stock
    - Allow to Discontinue Order for Packed Prescriptions.

4.18. Genogram

Advance notification: TrakCare Genogram will be sunset and no longer be sold or included in product offerings. It will continue to be supported with respect to error fixes only.

4.19. Medication Management

- Deprecated OEOrder.DispensingTimes
  - OEOrder.DispensingTimes (Change Dispensing Times) is available from Nurse Worklist. It consists of 24 hard-coded text boxes to change the individual times and is pre-dosing model functionality. Used for both Medications and RM orders.
  - Dosing Model replaces this component.

4.20. Orders

- Deprecated OEOrder.DispensingTimes
  - The ability to Change Dispensing Times using the OEOrder.DispensingTimes component was replaced with the introduction of the dosing model. This development removes outdated links to the now deprecated functionality from the layouts for Nurse Worklist and Unverified Order activities.
- Rehab Medicine (RM) Order Types access to Dosing Model

Description	The variable order days functionality that used to support customization of the timing of nursing orders has been deprecated	The original Order frequency (mins) has been converted to a hidden field	The original nursing duration field has been deprecated
Component			
Component Type			
Notes	On OEOrder.RM component, Variable Order Days (VarOrdDays) and Change Dispensing Time (ChangeDT) links have been removed from the layout	On OEOrder.RM component, Order frequency (mins) will be hidden but will store any entered custom frequency (ITM2Free TextFreqValue/Unit) converted to minutes to maintain backwards compatibility	On OEOrder.RM component, Duration (RMDuration) remains on the layout to maintain backwards compatibility with older order entry versions but is hidden when launched from OEOrder.Entry.
Replaced By	Dosing model link	New custom frequency field set	New duration field set

4.21. Patient Billing

- Payor Approval – Discharge Medication specified by Billing Group or Billing Subgroup
  - Deprecated the existing check box 'Discharge Medication' and removed it from the layout.
  - Added new fields to Payment Agreement->PA Order Item Approval and changed the logic.
- Claim Invoice Details – Ability to link and add attachments
  - The 'Documents' link has been deleted from the layout for PAPayorApprovReqObservation.Edit, ARPatBillObservation.Edit, and ARPatBillGroupChargeObserv.Edit. The link will remain for any existing site-level layouts on site.
  - Replaced by New link on ARPatBillGroupChargeObserv.Edit, called 'Attachments'. Both existing and new Patient/Episode documents can be linked to the observation.
- Standard Billing: CPT Codes against Order Item
  - Field InterfaceCodingReference is deprecated and removed from ARCPostOffice.Edit.
  - New child table of order item ARCItemCPTCode. New link in ARCItmMast.edit component to ARCItemCPTCode.FindList and changes in the logic of display of CPT code in Payor Approval Workbench and Bill Summary.

4.22. Pharmacy

- Removed Interactions from Drug Form Edit
  - The child table 'Interactions' (PHC_DrgInteraction) of the parent table 'Drug Form Edit' (PHCDrgForm.Edit) has been deprecated. This child table is no longer supported, hence it should not be used. Interaction functionality is handled elsewhere (against generic, generic-routed-form).

5. Features and Enhancements

5.1. Clinicians: Ability to assign a Clinician to a Referral Order and show on Workbench view

New functionality allows the user the flexibility and visibility to the 'Authorising Clinician' data via the Radiology Workbench to help manage patient order referrals.

1. Ability to search and view an individual 'Authorising Clinician' information within a set date range.
2. Ability to search and view an individual 'Authorising Clinician' information for an individual patient or for multiple patients.
3. Ability to search and view an individual 'Authorising Clinician' information for individual patient or for multiple patients for all existing filters within those already existing on the 'Radiology Workbench'.

5.2. Laboratory, Transfusion Medicine: Add 'Allow Issue on Positive Antibody Screen' restriction functionality

The access profile attribute of 'Allow Issue on Positive Antibody Screen' is now honored correctly when the Blood Issue Panel is authorized.

The 'Positive' nature of the antibody screen result is established by examining the new coded result attribute of 'Implicit Value'.

If the user does not have the privilege to authorize a crossmatch when the specimen's antibody screen is Positive, the error 'Antibody Screen for this specimen is Positive – cannot authorize' is presented.

A full release note is provided at: Laboratory, Transfusion Medicine: Add 'Allow Issue on Positive Antibody Screen' restriction functionality

5.3. Prescribing: Enhance decision support to trigger from medication dosing model changes

When a medication order with a custom dosing model calendar or cycle has its dosing model modified, if regular doses (not minimum dose) are changed or administrations added on the dosing model via direct edit or in order modification, the dosing check API, if enabled, or the core dose range check and lifetime cumulative checks will be triggered.

If administrations are added or dosing times changed on the dosing model via direct edit or in order modification, the core or API duplicate therapy and interaction checking will be triggered, whichever is enabled.

If the dosing model edits do not involve dose changes, time changes, or new administrations then no decision support, core or API, should trigger.

5.4. Episode Admin: Keep the same episode object when Converting an OP/ED episode to Inpatient Episode

The Convert to Inpatient component menu present on Episode Edit (PAAdm.Edit) uses a new conversion method, where the same episode object is kept and therefore a new episode is no longer created in the database. The conversion of an Emergency or Outpatient episode to an Inpatient episode changes:

- The Episode type to Inpatient
- The Episode status to Preadmission
- Keeps the same episode number

If the episode has an invoice associated with it, the conversion will not be allowed and existing message is returned: You are not allowed to convert this episode as there are invoiced orders. OK.

The same conversion method is called when automatically converting an outpatient episode into an inpatient episode at the time of booking inpatient appointments (this functionality is only triggered if parameter 'Consolidate Episodes at Time of Booking into an Inpatient Episode' is selected). When an outpatient episode is converted as a result of booking an inpatient appointment, the Ward, Bed and Episode Subtype is passed into the Episode Edit. This in turn generates a Bed Request with Status Requested.

If at the time of booking the outpatient episode identified by the system for conversion contains invoiced orders, the system will not allow the conversion. The same message as above is returned and a new inpatient episode will be created.

After conversion, the existing component menu Reverse Conversion is available on the Episode Edit screen and reverses the conversion as follows:

- The episode type is reversed to what it was (Outpatient or Emergency)
- The Episode Status is reversed to the status pre-conversion

If the IP episode has a Ward/Room/Bed assigned post conversion, then the system removes the Ward/Room/Bed during conversion. This in turn will remove the Bed Request as per existing functionality.

5.5. Clinical Pathways: Provide capability to filter Protocols by type in PAPathwayFindProtocols.List

The Protocol Type lookup field and partial search function for Code and Description fields will allow a user to navigate easily through the list of existing clinical pathway protocols when finding a protocol on PAPathwayFindProtocols.List.

5.6. Appointments: MDT Meetings: Add Event Session date range filter

This development enhances existing MDT functionality by allowing Event times to be filtered by date range. Users can filter the list on the fly as well as persistently via date offsets in the new preferences link.

This allows users to customize their view by setting a date offset in preferences that best fits their daily workflow while also allowing for easy access to other time frames on the fly.

Additionally, the layout of the Event screen has been modified to emphasize the most commonly used items by allowing the less frequently used items to be collapsed under the new Event Details accordion.

5.7. Workbenches: Display tasks created by logged on user but assigned to others

A new checkbox called 'Show Tasks Created by Logged On User' has been added to the Task Worklist search criteria to allow users to find the tasks created by the logged-on user but assigned to another user/care provider. The new checkbox can be used in combination with the rest of the search criteria to further filter the list of tasks returned, such as 'Show Tasks Created by Logged On User' and 'Tasks with Status Pending', or 'Show Tasks Created by Logged On User' and assigned to 'Care Provider x'.

This functionality will help users following up on tasks they created but are assigned to other users/care providers not themselves. This is particularly useful when tasks are used widely and users interact with many other groups/users/care providers via the task functionality and therefore the number of tasks retrieved will be too cumbersome.

Oncology use case: As an Oncologist doctor, I would like a patient to be scheduled for an MDT review. However, not all tests results have returned so I am unsure on which session to schedule the patient. I therefore create a task for my medical assistant to follow up on documentation and promptly book the patient in MDT as soon as the file is complete for review. I would follow up on that task in my list so as to know when the patient is being scheduled, and without having to create a grouped task with me and my assistant nor having to add her to my filter preferences.

5.8. Episode Admin, Waiting List: Cancer Type entered on WL to default through to the episode

A new option has been created to copy the Cancer Type value entered in the Waiting List Entry to the Episode created from the Waiting List Entry.

Functionality is controlled by a new option in Function Preferences – Waiting List IP Episode Generation for an Inpatient Episode and Function Preferences – Waiting List OP Episode Generation for an Outpatient Episode.

5.9. Patient Billing: Advance Payment Invoice to Final Invoice Calculation

When the Advance Payment Invoice is linked to an Episode Bill, the order items on the Advance Payment Invoice are to be negated in the Episode Bill.

5.10. Pharmacy: Quantity to Manufacture Should Respect the Administration Date and Time in Unit Dose Dispensing

The system now passes the Quantity to pack value from the pharmacy prescription edit screens to the Admixture Manufacture Screen, so the value in the Quantity to manufacture field to equal what is required for dispensing. If the value of the quantity to pack is a fraction the system will round the value to an integer.

5.11. Maternity: Copy Baby Birth Measurements to relevant Observation Items

Background:

At birth, the baby is measured (weight, length, head circumference and thoracic circumference) and values are recorded in the PAPregDelBaby.EditFull1 component against the maternal record.

These measurements are also existing observation items, and are used in questionnaires and observation groups to document the baby growth in the baby record.

Issue:

The values entered in PAPregDelBaby.EditFull1 component of the mother record are not observation items, hence they are missing from observation profiles and charts in the baby record.

Expected Behavior:

As a user, when I document the following birth measurements in TrakCare, I want to be able to use them in observation charts so that I can monitor the baby's growth during the hospital stay, or even as part of growth charts:

- Birth weight
- Birth length
- Head circumference
- Thoracic circumference.

When users enter or edit values in the baby record (PAPregDelBaby.EditFull1) recorded against the maternal record, the values entered are copied into the corresponding observation items in the relevant baby episode.

The values

1. Birth weight BABYBirthWeight

2. Birth length BABYBirthLength

3. Head circumference BABYOccipitoFrontalCircum

4. Thoracic circumference BABYThoracicCircumference

correspond to

- Weight WEIGHT
- Height HEIGHT
- Head circumference HEADCIRC
- Chest circumference GXXXCHESTCIRC

Edits made to the values in observation items should not be copied back to the birth record.

NB: BABYBirthWeight, BABYBirthLength and BABYOccipitoFrontalCircum are also available fields in the PAPregnancy.EditOther component. Any entry made in this component should NOT be pushed in an observation item.

5.12. Appointments: Consultation Services – Appointment Type based on Days

While giving an appointment, only the valid services based on Hospital Appointment Date Rules can be booked.

Hospital Appointment Date rules consider an initial appointment can only be booked X days after a previous initial appointment; follow up appointments can only be booked within X days after the initial appointment.

5.13. Clinicians ITS: Ability to assign a Clinician to a Referral Order and show on Workbench view

New functionality allows the user the flexibility and visibility to the 'Authorising Clinician' data via the Radiology Workbench to help manage patient order referrals.

1. Ability to search and view an individual 'Authorising Clinician' information within a set date range.
2. Ability to search and view an individual 'Authorising Clinician' information for an individual patient or for multiple patients.
3. Ability to search and view an individual 'Authorising Clinician' information for individual patient or for multiple patients for all existing filters within the those already existing on the 'Radiology Workbench'.

5.14. Code Tables: Payor Code Table – Revenue Cycle Management

RCM child table of Payor will be used by local development team for integration with Insurance post office. There is no core functionality for this child table.

5.15. Code Tables: Care Provider Claim ID – Additional fields

New fields have been added to Care Provider Claim ID screen, allowing the ability to record a different Care Provider Claim ID for different regions.

- Fields Invoice:
- License Issuing Authority: Look Up to the License Issuing Authority code table (New).
- Hospital: Look Up to the Hospital code table.
- Post Office: Look Up to the Post Office code table.

5.16. Coding and Grouping: Show Diagnosis Status column in Coding Screen

Three new editable fields have been added to MRDiagnos.EditDRG:

1. Diagnosis Status: Look up to Diagnosis Type code table
2. Diagnosis Type: Look Up to Diagnosis Status code table
3. Inactive: Tick Box

A new Clinical & EMR system parameter has been added, Do Not Allow Changing Diagnosis On Coding Screen – Tick Box. If selected for existing Coding Entries in MRDiagnos.EditDRG, the Code and Diagnosis fields will be read only, which prevents the user from changing the values.

5.17. Coding and Grouping: Coding – Risk of Mortality

A new field called Risk of Mortality MRAMRiskOfMortalityDR – Look Up to new code table: Risk of Mortality MRC_RiskOfMortality – under Classification Systems on the DRG Coding Screen PAAdm.DRGCoding.

Risk of Mortality is a code table Entry.

5.18. Decision Support: Visual Rules – Ability to Define Time Frames for Actions to Reoccur

This development extends the function by adding time value and time unit fields.

The time units permitted are days or hours.

The combination of this and the previous development now permits configuration of, for example, trigger once per episode per 1 day.

5.19. Episode Admin, Patient Admin: Section 2: Dynamic Column – Journey Board Group

Care providers do not always have a clear view of what stage the patient is at in their episode of care and it is hoped that this feature will help care providers to be able to work more efficiently.

5.20. EPR TrakCare: Creation of Blood Type EPR Profile

A new Blood Type Profile has been created, consisting of the Active Blood Type and the Historical Data.

Active Blood Type is the latest recorded Blood Type by the order entered (in reverse chronological sequence), and not the Date From/To dates in EPR Profile entries.

Historical Data are all the entries made before the Active Blood Type.

Multiple manual values can be entered. Once a Blood Type derived from a Lab result is added, manual entries are no longer allowed.

In this particular case, the Active Blood Type can be changed only by a new Lab generated Blood Type.

5.21. EPR, Medication Admin, Pharmacy, Prescribing: Support for Oxygen Prescribing

This feature supports oxygen prescribing for patients in the hospital and in the community.

5.22. Flowsheet: 'Perioperative Movement' Flowsheet Action Type

A new Flowsheet Action Type kas been created called 'Perioperative Movements'. It opens the Perioperative Movements screen (ORAnaesthesia.PrePost.Edit) linked to the procedure in context. If there is no procedure in context, the action is disabled.

Because part of anaesthetic record can be accessed through Anaesthetic Summary **ORAnaesthesia.Edit** as well as Perioperative movements screen **ORAnaesthesia. PrePostOp.Edit** by different users concurrently, the anaesthetic summary is not locked and each update is saved.

Out of scope of this feature:

- When selecting the new action, the current date and time is not defaulted into the Perioperative movements – Area Out Date and Time fields. The user must type it in the Perioperative Movements screen or use the existing 'Area Out' action for automatically defaulting the current date and time.
- The Anaesthetic Record Status is not added to the Perioperative Movements screen because it needs to be driven from the Anaesthetic Record itself.

Limitation:

When implementing this development, training should be provided to the customers using the Perioperative movements action, to ensure the screen is closed (selecting Update) when completing the documentation to avoid locking the Perioperative Movement screen, which is used in the OT Floorplan when moving the patient from one area to another. This is the scenario to be avoided:

1. OT Nurse opens ORAnaesthesia.PrePostOp.Edit from Flowsheet button.
2. OT Nurse leaves component open and walks away.
3. Patient is physically moved to recovery.
4. Recovery Nurse tries to move the patient from OT to PACU bed using Floor plan drag/drop.
5. Because the OT Nurse already has the ORAnaesthesia.PrePostOp.Edit component open, the Floorplan, which uses the same component, cannot complete the movement as the component is locked.

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