Implementation of an In-house Radiotherapy Incident Learning System compatible with the Canadian National System for Incident Reporting - Radiation Treatment

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PURPOSE

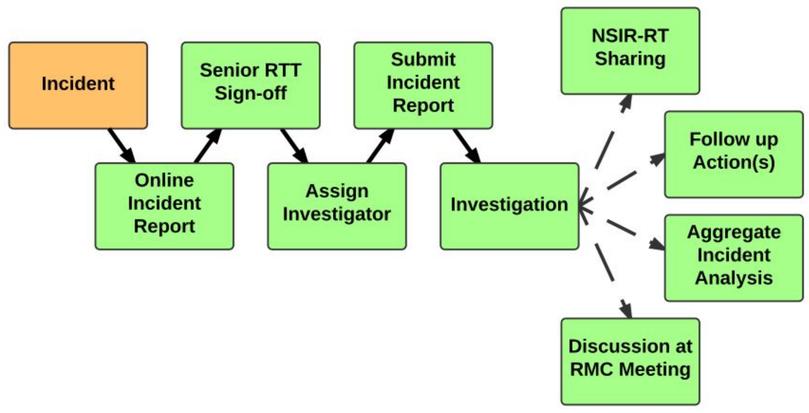
1. Develop an online incident learning system (ILS) to facilitate local workflow

2. Use Canadian standardized RT incident reporting taxonomy:
   - National System for Incident Reporting - Radiation Treatment
   - Milosevic et al. *Practical Radiation Oncology* 2016.

3. Incorporate features to reduce investigator workload

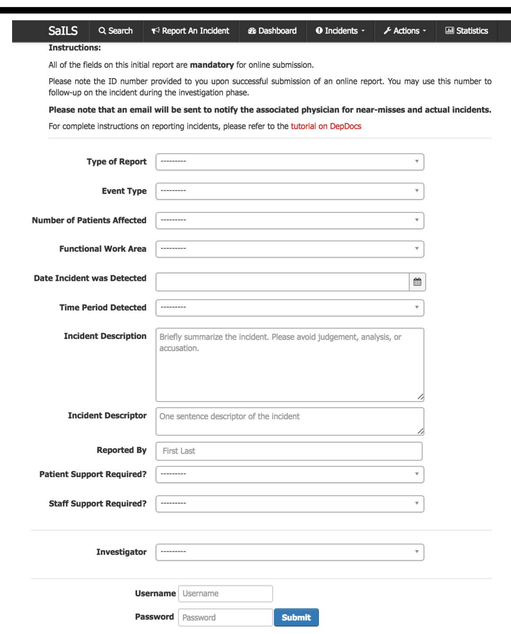
4. Learn from incident data to prevent recurrence and eliminate latent conditions

INCIDENT LEARNING WORKFLOW

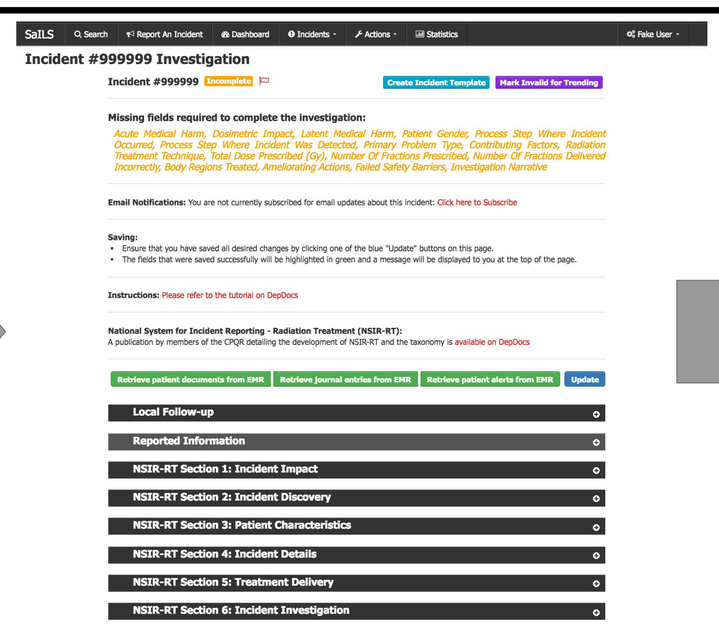


Overview of the incident learning workflow in our centre. All steps in the workflow are facilitated by the SaILS software, which incorporates the taxonomy of the Canadian National System for Incident Reporting - Radiation Treatment.

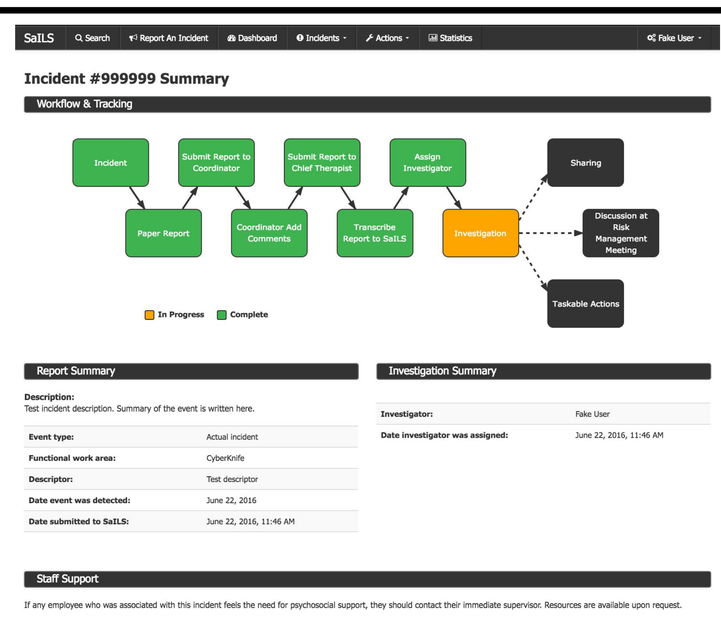
METHODOLOGY- THE SAFETY INCIDENT LEARNING SYSTEM (SaILS)



Incident reports: immediate investigator assignment (also supports paper forms)



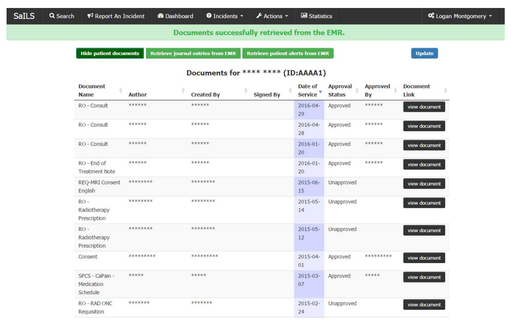
Incident investigation: NSIR-RT compatible, features to optimize workflow



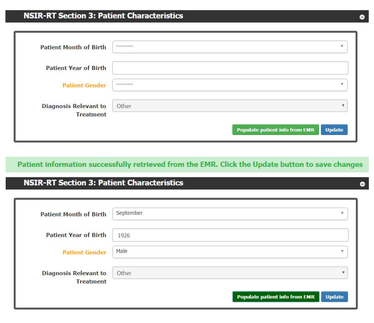
Feedback: dynamically updated incident summary pages (track by unique incident ID)

RESULTS

Workflow Optimization Features

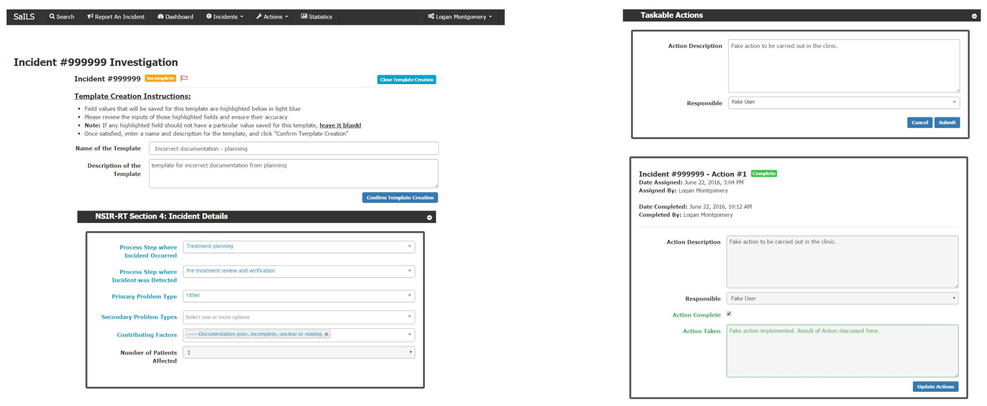


EMR Document Retrieval



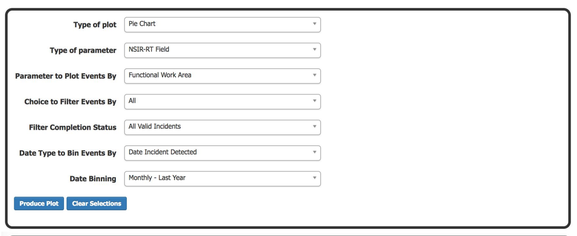
Field Population via EMR

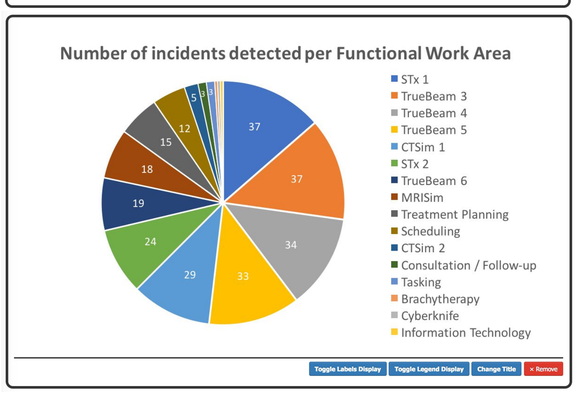
Incident Templates

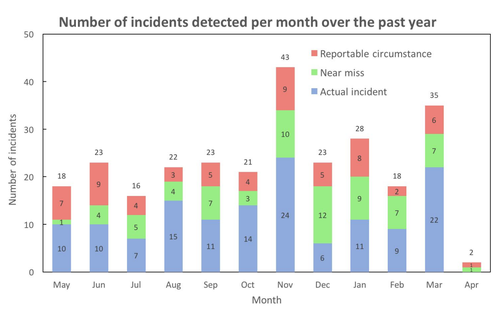


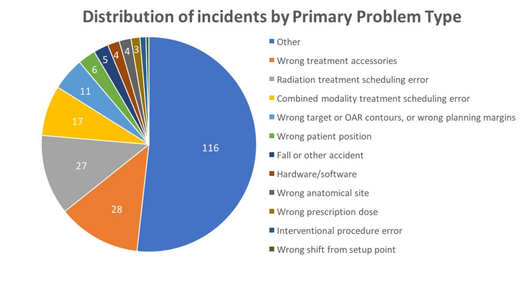
Taskable Actions

Clinical Results









- Statistics toolkit allows generation of plots of incident data sorted by options for any NSIR-RT field
- 272 incidents reported since since May 2016
- “Other” problem type to be addressed in NSIR-RT update

CONCLUSIONS

- **Open-source, NSIR-RT compatible, radiotherapy incident learning system with features to reduce workload and a complete data trending toolkit**

- **Please contact John Kildea at john.kildea@mcgill.ca if interested in deploying SaILS in your radiotherapy centre**

ACKNOWLEDGEMENTS

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