

Driving innovation through electronic PROMs in Radiation Oncology routine care

RANZCR ASM 2021

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1. NSCC 2. AlHI 3. USyd 4. CBDRH

Patient-reported Outcome Measures



Patient-reported outcome measures capture a person's perception of their own health through questionnaires (ACSQHC).



ePRO(M)s



ePRO Benefits

- Better QoL (symptom control)
- Better communication
- Survival benefit (Basch et al, JCO 2016)

ePRO Opportunities

• A successful ePRO implmenentation enables innovative routine care approaches...

ePRO Challenges

- Complex healthcare workflows
- Culture & Clinician By-in
- Technology (Integration)

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METHODS USED BY PRO SYSTEMS

Using Stakeholder Engagement to Overcome Barriers to Implementing Patient-reported Outcomes (PROs) in Cancer Care Delivery

Approaches From 3 Prospective Studies

Stover, Angela M. PhD*,†; Tompkins Stricker, Carrie PhD, RN‡; Hammelef, Karen DNP, RN‡; Henson, Sydney BS†; Carr, Philip BS†; Jansen, Jennifer MPH†; Deal, Allison M. MS†; Bennett, Antonia V. PhD*,†; Basch, Ethan M. MSc, MD*,†,§

Author Information ⊗



Journey





2016

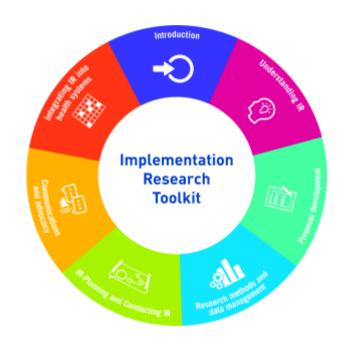
- Onsite ePRO collection (iPad in waiting room)
- Completion rates (35-59%; ASM 2017) too low.

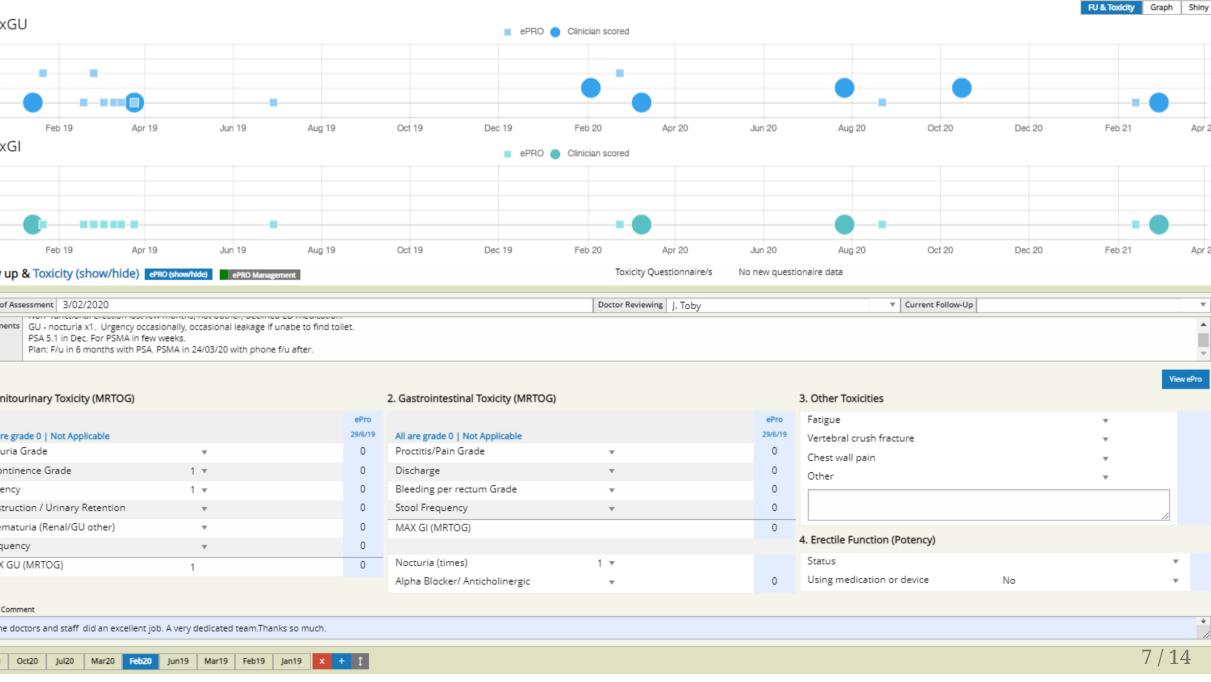
2017

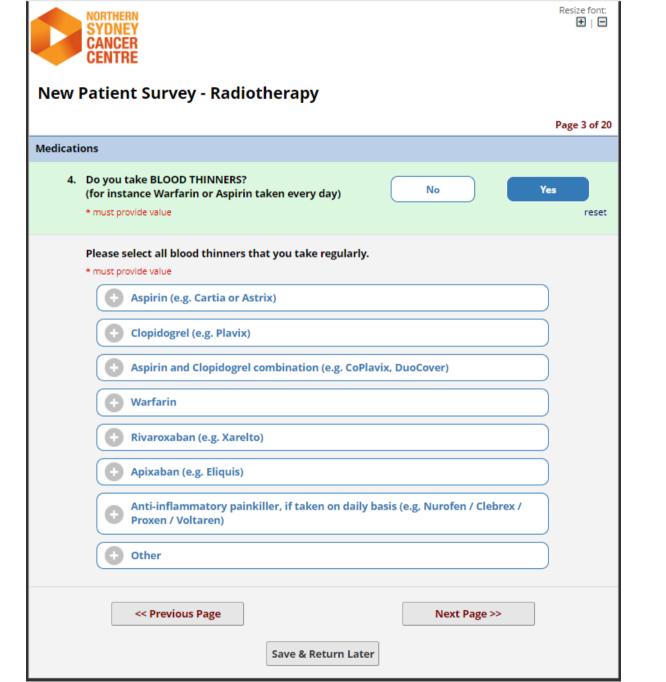
- Offsite ePRO: No commercial vendor
- Re-Discovery of REDCap as "ePRO survey engine" (survey designer & API)

2018

• Re-implementation of in-house clinical research system enabling REDCap **Integration**



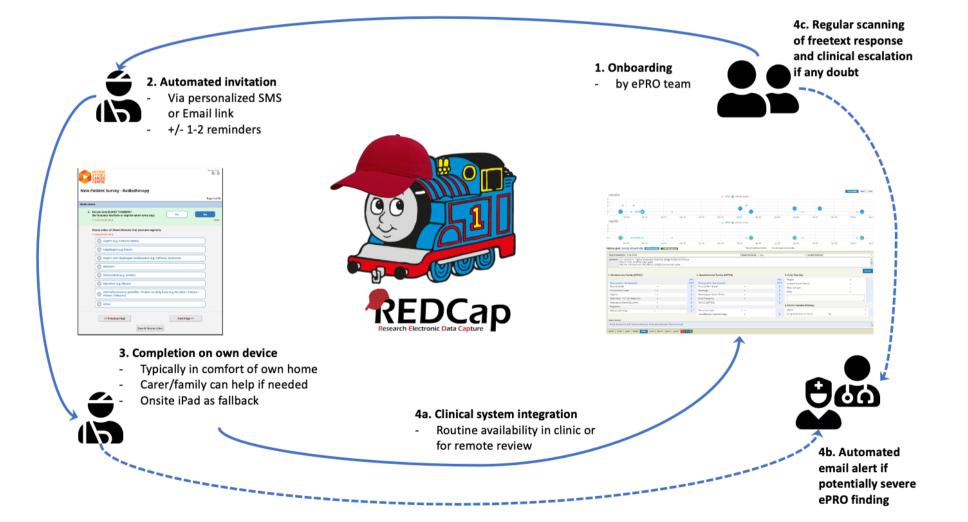




REDCap as ePRO Survey Engine











Superset of international REQUITE consortium's questionnaire:

- **Baseline** (ePRO prior to new patient appointment)
- Peri-treatment (abridged; weekly ePRO during and in first month post RT)
- Follow-up (6 monthly ePRO)



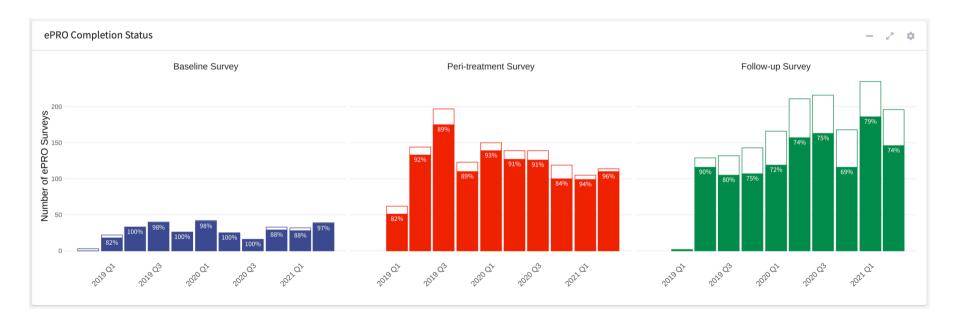




ePRO Coverage & Completion

Between Jan 2019 - June 2021 (30mo) n=3201 invitations (+/- reminders) for separate ePROs were sent as part of NSCC prostate cancer clinic.

	Baseline	Peri-treatment	Follow-up
Coverage (only for 2019)	85%	-	-
Completion (Jan 2019 - Jun 2021)	94% (293/311)	91% (1170/1292)	76% (1216/1598)

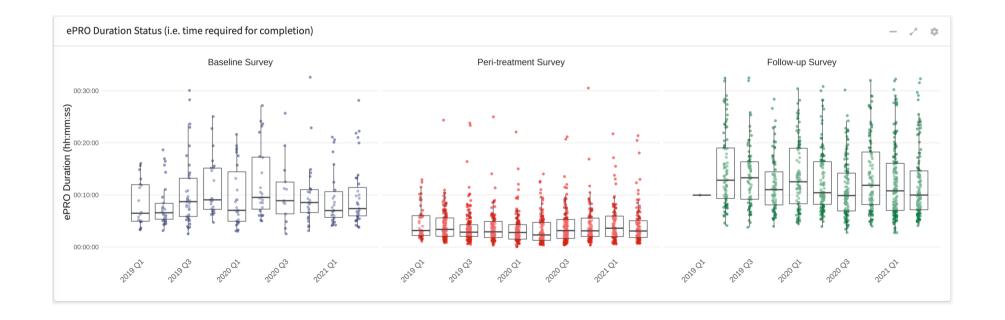








	Baseline	Peri-treatment	Follow-up
1st Quartile	6.0 min	1.8 min	7.7 min
Median	8.2 min	3.0 min	11.1 min
3rd Quartile	12.7 min	5.1 min	16.1 min



ePRO Innovations



Toxicity monitoring over time

- Longitudinal (late) toxicity monitoring 🖸 more relieable including less interrater issues with **ePROs**.
- Trend for hypo#/SBRT with acute symptom peaks post RT course remote **ePROs** +/- alerts can capture them and trigger actions.

Safe, risk-adapted remote follow-up

- Even before COVID-19 we had started to integrate **ePROs** into our phone follow-up program
- We are working on an **ePRO**-only approach under certain circumstances

Embedded, pragmatic real-world clinical trials

- Our ongoing in-house prostate cancer RCT (def. hypo# vs SBRT) has recruited n=188 pts in 2 years
- Without **ePROs** this wouldn't have been possible in a small 3 linac department.

Innovative care pathways

- Recent presentation on **ePRO**-driven referral pathway to community services
- Slides and **video** here: [URL]





Conclusion

Routine care ePROs are challenging on multiple levels, but definitely feasible and well worth the effort as they open exciting opportunities to improve the care for our patients.

Link to ePRO Dashboard:

https://thiloschuler.shinyapps.io/prospectorasm21 Link to ePRO-driven referral process (slides & VIDEO):

[URL] & [QR code]



