BACKGROUND

Patient Portal: Definition and Use

- Patient portal is a web-based personal health record linked to electronic health records (EHRs), allowing patients access to their healthcare information and the facilitation of communication with providers.

- Typically includes direct provider messaging, test results, clinical notes, and discharge paperwork.

- Portal use has increased significantly in the past 10 years, but mainly in the outpatient healthcare setting.

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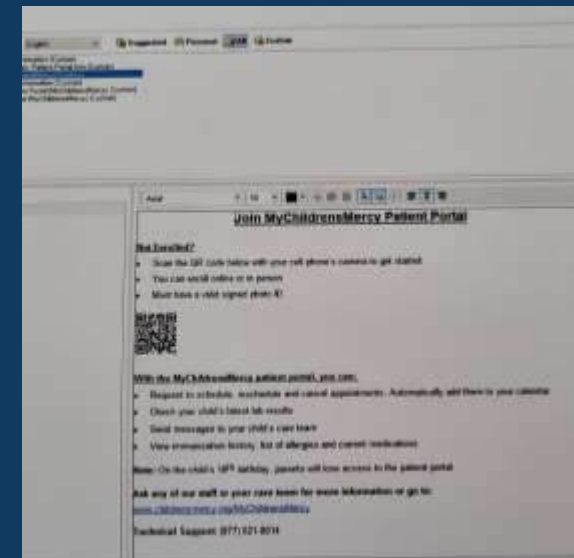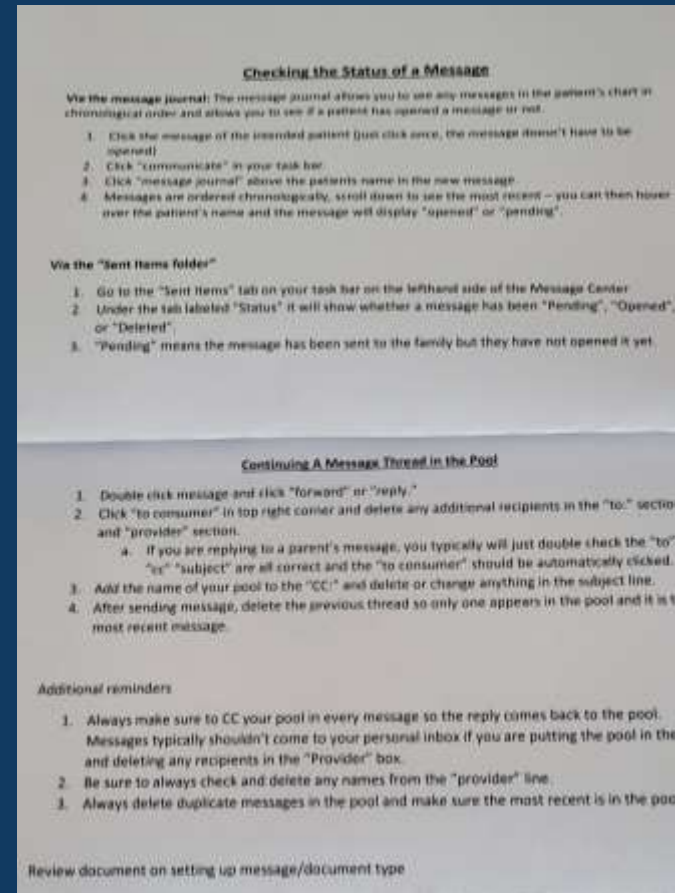
REVIEW OF LITERATURE

- Systematic review by Banguilan et al. 2022: Physicians perceive inpatient portals as beneficial to patients and saw an improvement in communication as a result.

- Systematic review by Kelly et al. 2018: Most patient and caregiver participants were interested in patient portal use while inpatient, used it when offered, found it easy and/or useful.
  - 5 studies reviewed were in a pediatric hospital setting.
  - Hospitalized children experience 3x more harm from medical errors than adults.
  - Engaging parents in inpatient care may improve safety and "parent portals" provide a unique opportunity to share healthcare information and promote engagement.

- Prospective study by Kelly et al. 2017: An inpatient pediatric med/surg unit provided families with a tablet computer to access the patient portal and communicate with the inpatient team over a 6-month time period.
  - Most liked features included vitals, medication list, health care team information, and schedules.
  - 90% satisfied with the portal
  - 98% felt it was easy to use
  - 94% felt it improved care
  - 60% felt it improved communication
  - 89% perceived it reduced errors in care
  - 8% found errors in their child's medication list

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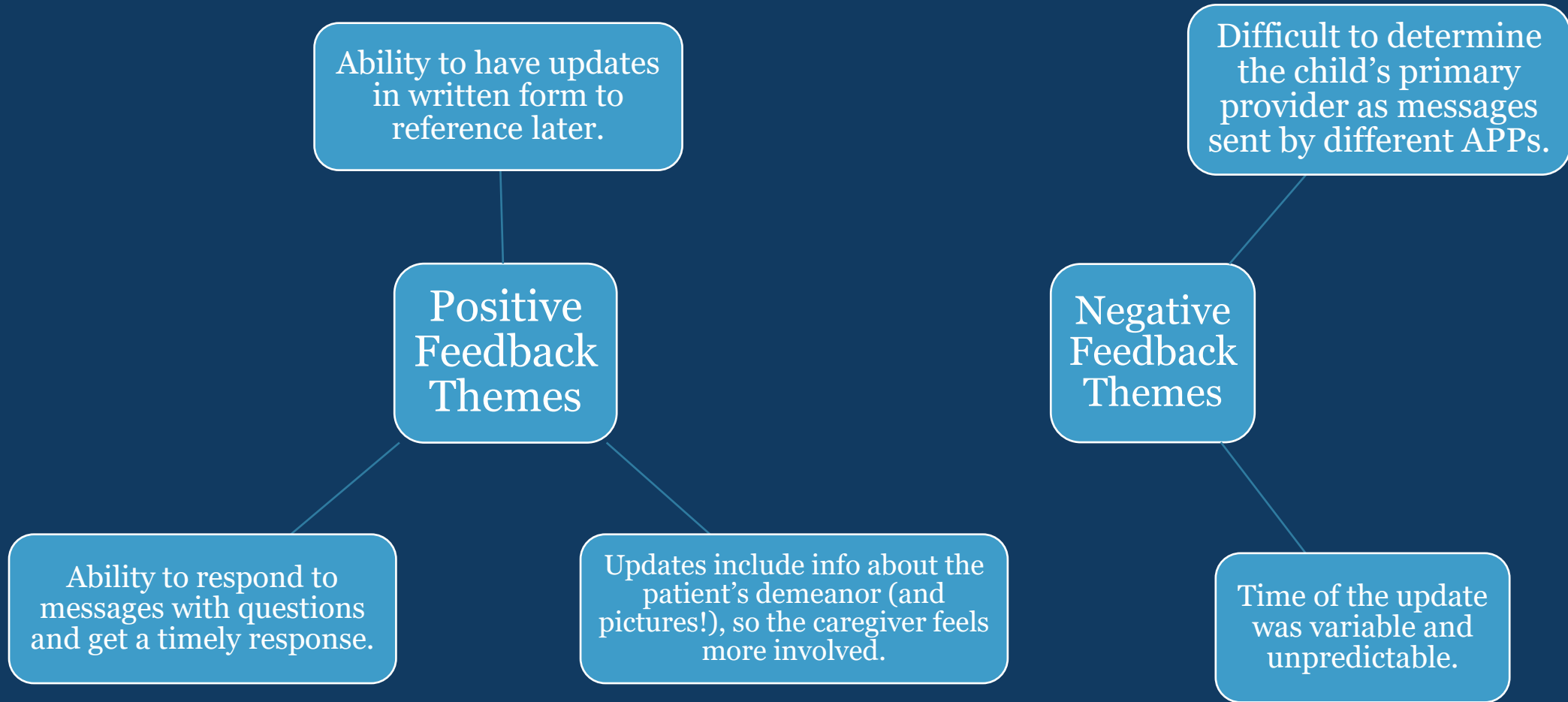
QUALITY IMPROVEMENT PROJECT

- Problem Statement: Utilization of electronic portal communication has not been widely used in the inpatient setting but is frequently used in the outpatient setting for communication between the patient/family and the care team to positive effect.

- Objective: To determine the feasibility of healthcare providers using the patient portal to communicate with caregivers of children admitted to the hospital of an inpatient acute care cardiology service.

- Aims: To demonstrate that the patient portal can be easily used by providers to send daily updates to families who are unable to be at the bedside of their child, and this in turn can improve caregiver-provider communication during inpatient hospitalization.

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METHODS

- PDSA Cycles performed over 6 months to assess feasibility

- Caregiver satisfaction evaluation + feedback elicited via survey sent through the patient portal

- Healthcare provider (APNs) feedback elicited via survey at the end of the final PDSA cycle
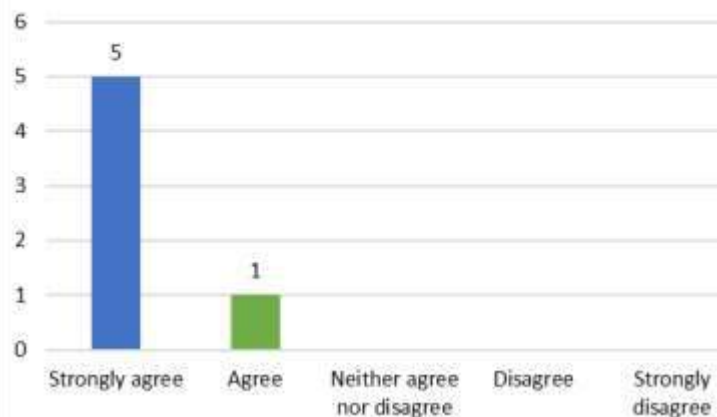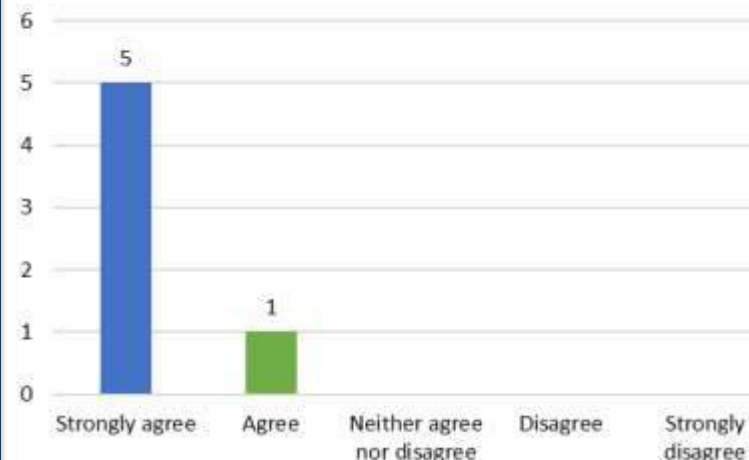
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RESULTS: CAREGIVER FEEDBACK

Ability to have updates in written form to reference later.

Positive Feedback Themes

Ability to respond to messages with questions and get a timely response.

Updates include info about the patient's demeanor (and pictures!), so the caregiver feels more involved.

Difficult to determine the child's primary provider as messages sent by different APPs.

Negative Feedback Themes

Time of the update was variable and unpredictable.

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RESULTS: PROVIDER FEEDBACK
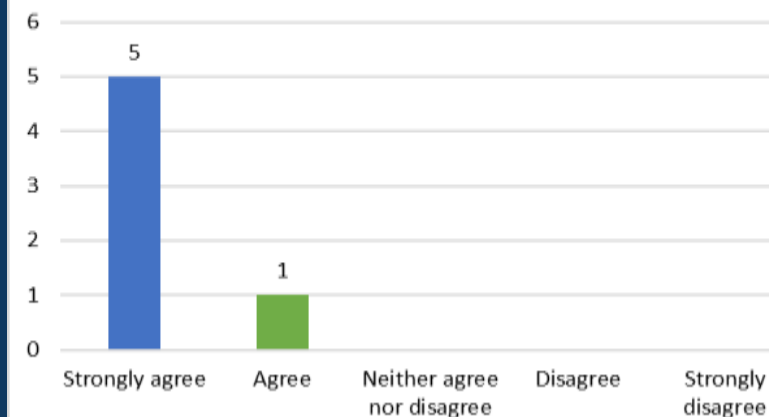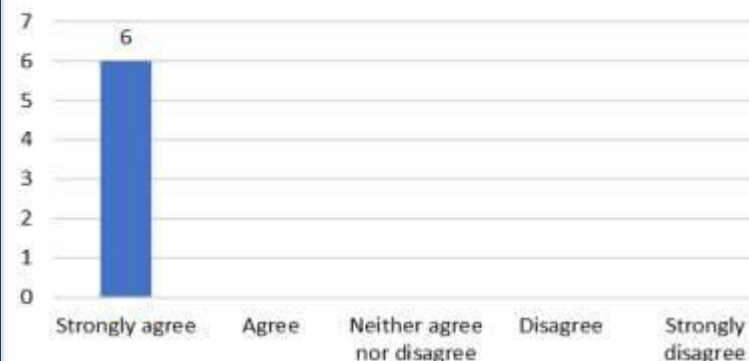
SUCCESS . . .

- QI initiative demonstrated the feasibility of healthcare provider use of the patient portal in providing daily updates to patient caregivers on an inpatient pediatric acute care cardiology service.

- Caregivers and providers both reported positive experiences with patient portal utilization and feel it has the potential to improve caregiver-provider communication.

- Proposed next steps were to expand patient portal utilization to all inpatients on the ACCU as well as to the CICU.

BUT . . .

- Despite initial success and positive feedback – the patient portal is no longer being used by the ACCU providers to communicate with families on a regular basis.

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CHALLENGES TO FULLY IMPLEMENT & EXPAND

Healthcare providers

- ACCU = Heart Center APPs + rotating residents every 2-4 weeks

- CICU = Heart Center APPs + rotating fellows every 2 weeks

- Easy to provide daily update, but harder to manage f/u messages and set/meet expectations of families

Caregivers

- Ease of enrollment
  - Must have an email address
  - Access reps to initiate process or QR code, but there is a 24-48 hour delay from signing-up to the ability to use the portal

- Disparities
  - Internet access
  - Language
  - Literacy

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FUTURE RECOMMENDATIONS

- Organizational/widespread adoption of patient portals
- More fully evaluate and work to minimize or eliminate barriers prior to project
  - Build on outpatient experience
  - Caregiver/patient access
  - Parental preferences
  - Provider workflow
- Include inpatient providers in any upgrades or redesign of the portal (EHR)
- Improved inpatient provider team support (RN)

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QUESTIONS???

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REFERENCES & ACKNOWLEDGEMENTS

- Banguilan, K.L., Sonnenberg, F., Chen, C. Physicians' Perspectives on Inpatient Portals: Systematic Review. *Interactive Journal of Medical Research 11*(2), 2022.

- Kelly, M.M., Coller, R.J., & Hoonakker, P.L.T. Inpatient Portals for Hospitalized Patients and Caregivers: A Systematic Review. *Journal of Hospital Medicine,* 13(6), June 2018.

- Kelly, M.M., Hoonakker, P.L.T., & Dean, S.M. Using an inpatient portal to engage families in pediatric hospital care. *Journal of the American Medical Informatics Association,* 24(1), 2017, 153-161.

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