What Is Full Capacity Protocol, and How is it Implemented Successfully?

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Background and Purpose

- Full capacity protocol (FCP) is an intervention designed to address emergency department (ED) crowding.
- Despite FCP international recognition and positive effects on hospital performance measures many hospitals, even the most crowded ones do not adopt FCP.
- We conducted this study to explore core components of FCP and identify the key determinants of successful FCP adoption and implementation.

Methods

- We conducted semi-structured interviews with key informants (e.g., division chiefs, medical directors, etc.) involved in the adoption and implementation of FCP. We used the Consolidated Framework for Implementation Research (CFIR) to guide data collection and analysis. We used template analysis approach to determine the relevance of the CFIR constructs to implementing the FCP. To identify the core components of FCP, we used non-experimentally approach. We analyzed the responses to the interview questions about FCP definition and FCP key principles, compared different hospitals' FCP official documents and consulted with the original FCP developers. We then used an adaptation framework to categorize the core components of FCP into three main groups. Finally, we summarize and present the practical recommendations for each barrier based on what the interviewees provided.

Results

What is FCP?

- FCP defined as a hospital-wide policy that includes different levels; each level contains several actions a hospital could take during crowding episodes. To activate each level of FCP, a certain set of criteria should be met.

Hospital Full Capacity Protocol

	Level 1	Level 2	Level 3
Criteria	85% of emergency department beds are full or at least 1 of the following: • More than 3 ICU patients are boarded in the ED for more than two hours • More than 2 level 2 ESI patients waiting ≥30 minutes in waiting room • More than 1 level 1 ESI patient(s) in ED with active resuscitation	All emergency department beds are full or at least 1 of the following: • Level one takes longer than 2 hours • More than 20 patients in waiting room waiting >2 hour • More than 5 ICU patients are boarded in the ED for more than two hours • More than 4 level 2 ESI patients waiting ≥30 minutes in waiting room • More than 50% of ED beds occupied with patients who have been admitted waiting on orders and/or bed assignment	All emergency department beds are full or at least 1 of the following: • All alternative care areas are in use and all the inpatient hospital beds are filled. • Level two takes longer than 4 hours • More than 20 patients in waiting room waiting >4 hour • More than 5 ICU patients are boarded in the ED for more than four hours • More than 6 level 2 ESI patients waiting ≥30 minutes in waiting room • More than 75% of ED beds occupied with patients who have been admitted waiting on orders and/or bed assignment
Actions	• The entire hospital including housekeeping supervisors should be aware that patient throughput becomes a priority. There's an alert that goes out to all the inpatient computers, to say the ED is at phase one of the full capacity protocol. • Departmental leaders should facilitate contributions from within their respective areas to remove any barriers to patient disposition. • Radiology technologists and/or labs staff should prioritize patients with conditional discharges waiting on radiology exam and/or labs test results. • Physical therapy (PT) staff should prioritize patients whose discharge is pending clearance by them. • The patient flow coordination team should • Facilitate physician-to-physician communication • Clean and make ready to use any open/available rooms faster • Facilitate discharge and/or disposition of patients • Retrieve patients from triage to fill open rooms • Facilitate timely lab test, radiology and pharmacy • Follow up to timely response from consulting physicians regarding patient disposition • Pay attention to webpage requests from the equipment team to have unused patient care equipment released for redeployment • Ask patient transportation team to transport admitted patient faster • Asked ED physicians to write orders or make calls faster • Get social work involved if someone needs a ride home or outside placement. • Evaluate the need for additional staffing (nursing, clerical staff, volunteers, and pharmacists) to help the ED staff care for patients. • Double-post all admitted patients to facilitate patient placement in the first appropriate available bed. • Ensure all patients to be admitted have a bed request order. • Appropriate triage and placement of ambulance patients to the waiting room to assure higher acuity patients from patient room are seen sooner.	• If an admitting physician requests to see the patient in the ED prior to arrival on floor, then he/she should see the patient within 30 minutes. • Assess ED staffing needs for the oncoming shifts and communicate requests for per diem nurses to help care with admitted patients in collaboration with ED nurse manager and nursing coordinator. • Stop accepting referral patients. (Patient flow coordination team case by case should manage exceptions). • The patient flow coordination team should • Move discharged patients awaiting transportation to discharge holding area (discharge lounge) while awaiting transport. • Allocate staff to reassess patients in the waiting room. • Check with each unit to make sure there's enough staffing on inpatient units. • Bring more resources to ED to take care of the patients, in addition to ways to get them to inpatient units. • Identify possible alternate care areas to transfer admitted patients (i.e. GI lab, Dialysis, etc.) • Prioritize admitted patients for inpatient room placement based on the amount of ED resources needed to care for the patient, not time patient has been in ED. • Prepare patients for admission to alternative treatment areas such as patient lounges and inpatient hallways. • Based on predetermined criteria, evaluate admitted patients in the ED for potential disposition to inpatient hallways	• Admitted patients in the ED will be moved to their assigned inpatient location when the room becomes available without regard to shift change, staff meal, break periods, hour of day or availability of bed or curtain. The patient will remain on stretcher or bed provided in the ED until the appropriate unit bed or curtain is located and made available. (Usually due to room cleaning). • Predetermined patients at level two will be transferred to hallways in the inpatient units. While those patients are not in a room, they receive care from inpatient physicians and nurse specialists. • The patient flow coordination team should • Have a meeting with on-call executive board to talk about current status and what they can do to expedite patients leaving the emergency department. • Postpone elective surgeries and procedures • Request EMS diversion based upon patient acuity and volume until further notice • Utilize all available patient treatment areas (including inner core hall spots and inpatient hallways) and based on predetermined criteria place admitted patients in those spots. • Work with housekeeping office to transport admitted patients within 15 minutes from the time the bed is assigned. • Open incentive shifts

FCP adaptation framework

- Hospitals can adapt FCP based on their local needs, gaps, principles and hospital culture. To do so, they can use FCP adaptation framework that provides guidance in terms of things that can and cannot be altered from the policy.

Green

Things that can be changed:

- Name of the protocol
- Time of morning safety huddle
- Incentives for participation
- Format and wording of the protocol

Yellow

Things that can be changed/modify with caution:

- Add other ED crowding interventions such as surgical smoothing
- Activation triggers for each level
- Actions in each level (unless it specified)
- Order of actions in each level
- Generally aim to place no more than 1 to 2 patients on any one-inpatient hallway. Hospitals cautiously can change this to whatever is needed, depending on crowding situation, the physical environment on each inpatient unit, and available staff and resources in inpatient units.

Red

Things that cannot be changed/ignored:

- The order of the levels (sequence)
- Patient flow coordination team must include nurse manager and at least one person from executive level
- Understand the regulatory implications and prepare a risk assessment and document for regulatory review
- Do not delete an entire level of the program
- Notify the patient in advance about the situation
- Place patients in areas with access to a bathroom
- For patients in hallways provide a nurse call device, a curtain or privacy screen, a written evacuation plan in case of fire
- Placed patient in areas that least obstruct flow
- Transferring patients who are not eligible to transport to inpatient hallways (i.e. vented patients or patients that require suctioning.)

Adoption and implementation of FCP main barriers

- Lack of coordination between different parts of the hospital
- Inpatient nursing resistance
- Lack of leadership support and commitment (mainly Nurse Managers)

"So it was buy-in at the nursing leadership level that was very important and the most influential people in this actually were those nurse managers. Because it's the nurse managers that need to go back to the nursing staff and say we are doing this for our patients. If they had gone back to their nurses and say listen to what they're making us do now, putting patients in hallways, this would have never worked."

"Despite our efforts such as meetings, grand rounds with national leaders on this topic to advance the adoption of a full capacity protocol we have not been able to convince the hospital to do this. It was essentially blocked by our CNO, who was in place for years."

- Inability to reach the consensus about each level of FCP criteria
- Difficulties to change the hospital's culture

"I mean I think we have a collaborative culture that's very based around the patient and trying to do the right thing for the patient. I think there are good relations with the inpatient and administration. I don't think we always necessarily agree on the best way to go about things, but I certainly think if we were able to make a compelling argument, then we maybe able to make grounds on it."

- Concerns about exacerbating ED crowding because of other nearby crowded EDs (domino effect)
- External policies and regulations such as fire marshal guidelines and nursing guidelines on patient/nurse ratio

"One of the things that were brought up by the faculty and the nurses was that, when we were crowded it puts significant strain on them to accept more patients, especially ambulances. The walk-in patients will walk in, and there's no way to deter them, but as long as we continue to be successful with that (FCP), we also accept all ambulance patients diverted from other hospitals. To some extent, we're victims of our own success."

- Lack of knowledge and information about FCP
- Limited resources
- Difficulties to restructure the inpatient units to have adequate staffing and resources, such as central telemetry monitoring, privacy screens, a wireless call system, portable monitor/defibrillator and portable suction equipment, appropriate bathroom facilities for transferred patients, and other resources necessary to provide high-quality patient care

"The one sort of challenging part of it was we wanted Epic ... So we use Epic as our electronic medical record. We wanted them to be able to create these additional spots. So you had to have them create a virtual spot to put the patient into on the floor, so that way the nurses could chart and the doctors could write notes and et cetera, et cetera. So they had to get all that built in Epic."

Conclusions

- Over the past 20 years, FCP has evolved from the idea of transferring boarded patients from ED hallways to inpatient hallways to a complex hospital-wide intervention with several components and multiple levels.
- Hospitals defined FCP heterogeneously, and each hospital adopted its own version of FCP. While inpatient boarding still is the main component of many FCPs, some hospitals adopted FCP without inpatient boarding. On the other hand, some hospitals only implemented inpatient boarding without other FCP components.
- The key determinants to adopt and implement FCP were collaboration with inpatient nursing, reaching the consensus about the criteria for activation of each level and actions in each level, complying with external regulations and policies, modifying the electronic health records system, restructuring the inpatient units to have adequate staffing and resources and gaining hospital leaders support.