BAPEN COVID-19 Service Improvement & Innovation Awards Entry Form

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Institution:
Imperial College Healthcare NHS Trust

Summary of the Service Improvement & Innovation:

Post-intensive care syndrome (PICS) first described in 2010 as the disability that remains in surviving critical illness. This comprises impairment in psychological health, cognition and physical function of the intensive care unit (ICU) survivor. There is also a mental health element in relation to the caregivers.

In 2009 NICE stated that "given the individual impact on patients, and ripple effects on families and society in general, poor-quality rehabilitation and impaired recovery from severe illness should be regarded as a major public health issue." (NICE CG83). Unlike Trauma and Stroke services, in Intensive Care there has been a lack of funding and perceived lack of evidence base so it has not developed its own support service for discharged patients. When Covid-19 pandemic struck the Faculty of Intensive Care (FICM) was half way through delivering an initiative called Life After Critical Illness (LACI) to support the delivery of this. Therefore, from an NHS systems perspective the problem was identified before, but pandemic has highlighted the problem and offers an opportunity for change.

The additional needs of the COVID-19 patients are well documented in the recent NHS publication After Care Needs of inpatients recovering from COVID-19; these will be even more complex for the ICU patient. They have been categorised these into

- Physical with bodily systems affected such as Respiratory and Neuromuscular as well as the management of underlying medical conditions of for example diabetes
- The psychological and neurophysiological effects of the ICU experience including delirium, brain fog, stroke, survival guilt and PTSD
- And the social needs acquired from family separation and financial hardship

Data from the Intensive Care National Audit Research Centre has shown that as of the beginning of July there have been over 10,000 ICU COVID-19 admissions in Eng/Wales/NI. Furthermore they demonstrate that survival for ICU COVID patients is increasing from 50% to 70%
This increased number of ICU discharges has led to greater prevalence of PICS in the hospital discharge population. The increase in number has not only put a strain on ICU services but also recovery and rehabilitation services for patients and their families. Due to this rapid influx, there is a poor capacity and knowledge in community therapy to cope.

The Critical Illness Follow up (CIFU) clinic was therefore developed at the Trust. It is a new pilot clinic for adult patients discharged after critical illness at Imperial College Healthcare NHS Trust.

- Clinic started on 16th May 2020

- It is aimed at the critical 4-6 weeks' time point *after* discharge from hospital

- The clinic is a therapies-led *virtual* clinic, supported by doctors, nurses and psychologists with a novel approach to personalised care planning of early rehabilitation and support needs

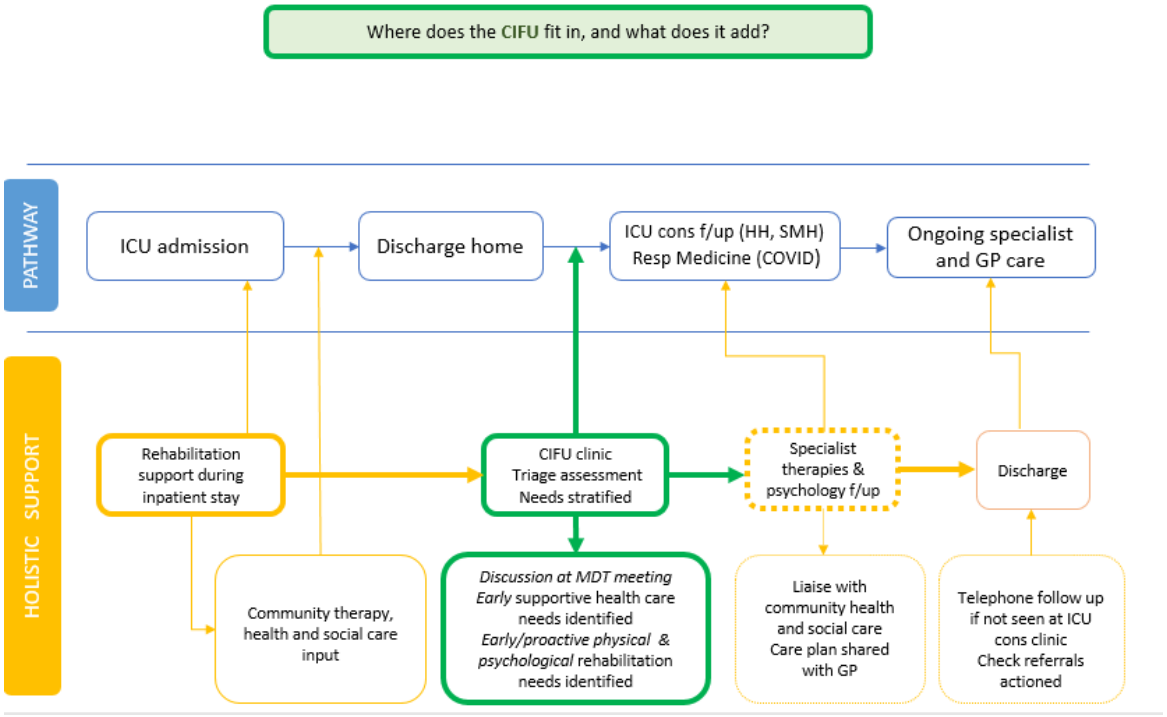
- The clinic targets patients who require support through a traffic light system for stratifying complexity of need and reviewing complex patients at a weekly MDT meeting

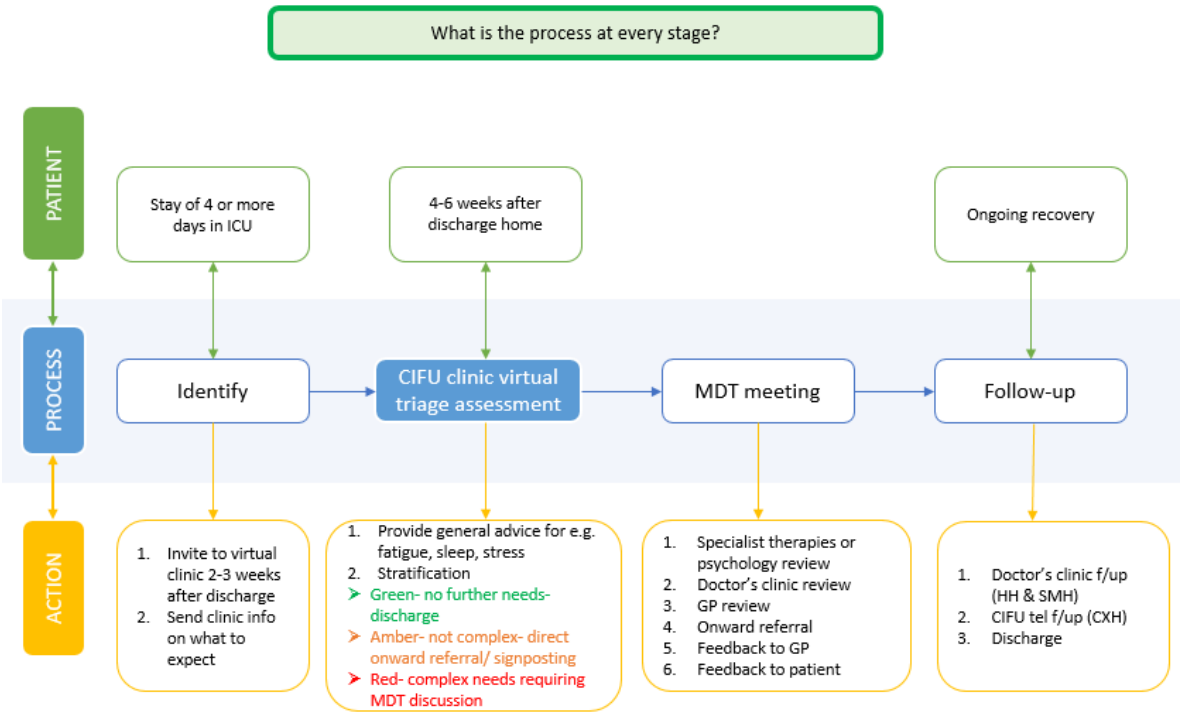
- A multidisciplinary approach is taken in the assessment and review of patients, referring

to therapy specialities, psychology, nursing, and ICU consultants, depending on patient need

- The clinic draws on models of holistic support in compliance with NICE guidance (2009)
- It is fully aligned with existing medical and rehab pathways

The CIFU clinic is targeted at all patients discharged from hospital with a length of stay of four days or more in intensive care





A clinical decision aid tool was developed using a systems approach with key stakeholders to carefully establish risk in each of the therapy domains (diet, speech and language, physio and occupational), nursing, pelvic health and psychology, to enable staff to carry out the triage assessment calls resulting in an indicative care plan.

Data and Key Performance Indicators outlined for this clinic are as follows:

	Metric description	Baseline	Expected improvement	Data required to calculate the KPI
1.	**Feasibility**: proportion of eligible patients from target pathways (>3 days ICU stay) reviewed in clinic	0	>75%	data gathered by CIFU
2.	**Utilisation**- proportion of patients accepting referral to clinic	n/a	>75%	data gathered by CIFU
3.	**Intensity of support**: Proportion of patients requiring support via amber and red pathways	0	>50%	data gathered by CIFU
4.	**Needs identification**: Proportion of patients with 2 or more unmet rehab needs	0	>50%	data gathered by CIFU
5.	**Early rehabilitation**: proportion of patients receiving general rehab advice and information (fatigue management, energy conservation, breathlessness management, cognitive strategies, dietary advice)	0	>50%	data gathered by CIFU
6.	**Early specialist rehabilitation**: proportion of patients where a new rehabilitation referral/ follow up review is initiated by CIFU	0	>50%	data gathered by CIFU
7.	**Patient experience:** positive triage assessment patient feedback score	n/a	> 75%	data gathered by CIFU
8.	**Plan shared with GP:** how many new care plans are shared with GPs by CIFU	n/a	>75%	data gathered by CIFU

Challenges faced and how they were overcome:

- Time – the clinic went from planning to implementation in only 3 weeks.
  This took a lot of determination and leadership from Julian (our project lead) in coordinating all of the different aspects of the services we wanted to provide through the clinic. We adopted a systems thinking approach to how we could bring them all together into the first triage phone-call.
- There were elements of policy resistance in that we had to ensure we were not providing a service already offered by the community teams
  We invited key stakeholders in the community re-enablement teams to our MDT where

they could educate on capacity and advise on best placed community services where longer term follow up for our patients was deemed appropriate. We were also careful not to overlap with services already being provided and update the GP with all aspects of care provided by the CIFU clinic.

- Long term sustainability – the clinic was primarily being staffed by redeployed/shielding personnel. We outlined a clear pilot period for this clinic and points of review at month 1, 2, and 3. After which data and KPIs would be evaluated against the externalities to establish if it would be necessary to continue. This will then be reviewed with finance with view to fund staffing and service delivery going forward.

Evaluation and Outcomes:

At 2 months, the metrics look as follows:

	Metric description	Baseline	Expected improvement	Review period 2 months
1.	**Feasibility**: proportion of eligible patients from target pathways (>3 days ICU stay) reviewed in clinic	0	>75%	100%
2.	**Utilisation**- proportion of patients accepting referral to clinic	n/a	>75%	97%
3.	**Intensity of support:** Proportion of patients requiring support via amber and red pathways	0	>50%	82%
4.	**Needs identification**: Proportion of patients with 2 or more unmet rehab needs	0	>50%	75%
5.	**Early rehabilitation**: proportion of patients receiving general rehab advice and information (fatigue management, energy conservation, breathlessness management, cognitive strategies, dietary advice)	0	>50%	84%
6.	**Early specialist rehabilitation**: proportion of patients where a new rehabilitation referral/ follow up review is initiated by CIFU	0	>50%	72%
7.	**Patient experience**: positive triage assessment patient feedback score	n/a	> 75%	Triage assessment score: 83% rated 5/5 13% rated 4/5
8.	**Plan shared with GP**: how many new care plans are shared with GPs by CIFU	n/a	>75%	100%

What is the level of impairment?

EQ5D	% PATIENTS
MOBILITY	
I have no problems in walking about	30%
I have some problems with walking about	69%
I am confined to bed	0%
SELF-CARE	
I have no problems with self-care	51%
I have some problems washing and dressing myself	43%
I am unable to wash and dress myself	6%
USUAL ACTIVITIES	
I have no problems with performing my usual activities	30%
I have some problems with performing my usual activities	57%
I am unable to perform my usual activities	12%
PAIN / DISCOMFORT	
I have no pain or discomfort	27%
I have moderate pain or discomfort	64%
I have extreme pain or discomfort	9%
ANXIETY / DEPRESSION	
I am not anxious or depressed	60%
I am moderately anxious or depressed	34%
I am extremely anxious or depressed	3%

What is the overall pattern of needs elicited?

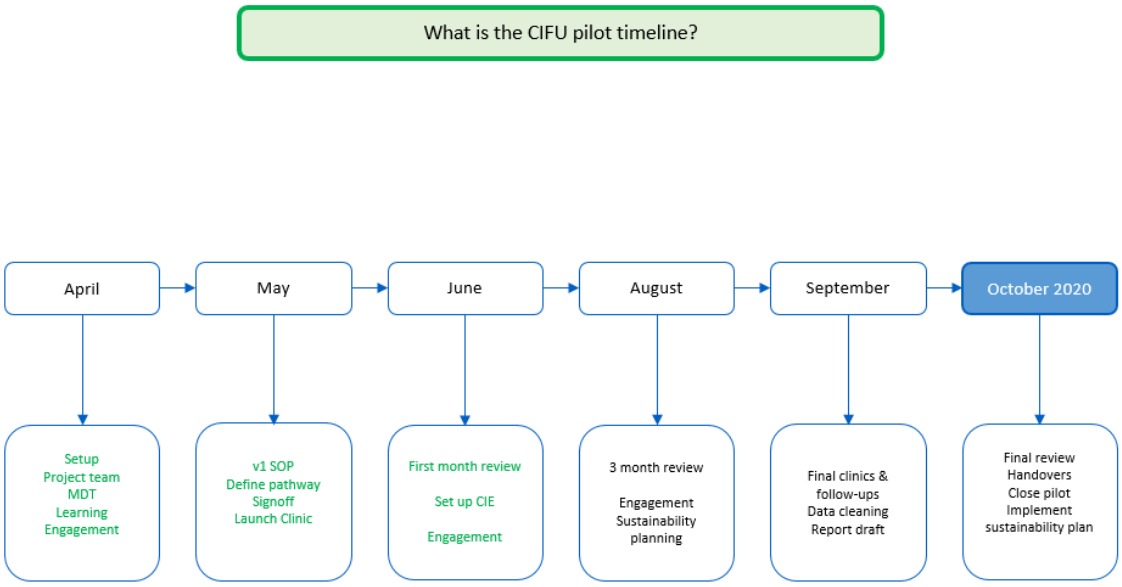
Rehab (physical and psychological) advice	% of total: 86
Onward referrals & specialist follow up	
Community OT & Physio	% of total: 38
Psychology	% of total: 29
Musculoskeletal physio	% of total: 18
Imperial consultant review (ICU follow up, respiratory medicine)	% of total: 23
GP	% of total: 29
Speech and language therapy	% of total: 22
Pelvic health physio	% of total 6
Nutrition & Dietetics	% of total: 12
Other	(learning disability team) % of total: 1

Future Plans:

What have we learnt from this pilot?

- Patients will engage with this offer.
- We can offer patients a virtual assessment in a way that promotes holistic support
- We identify new needs that arise at this point which can be different to what was identified earlier, at the point of discharge.
- We can identify possibilities for early support with therapies, psychological, medical and nursing needs and action these efficiently.
- This is an efficient & effective model for offering supportive care to people recovering from critical illness.

The pilot period has now closed to referrals (3 month pilot period), although we continue to work through referrals as referred patients are yet to approach 4-6 weeks post discharge.



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