



The CAREFUL clinical collaboration app

Transforming communication
and continuity of care

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Improving critical communication
amongst health workers would
prevent millions of adverse events.”

World Health Organization, April 2021¹



A photograph of two healthcare workers, likely nurses, in a clinical setting. They are both wearing blue scrubs and face masks. The worker on the left is wearing glasses and a black face mask, and is holding a blue pen over a clipboard. The worker on the right is wearing a light blue surgical mask and is looking at the clipboard. The background is a bright, out-of-focus window with white blinds.

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Handovers are a deeply flawed healthcare process with the demonstrated potential to harm patients.”

BMJ Quality & Safety Editorial, 2021²

1. World Health Organization. 2021. *Global Patient Safety Action Plan 2021-2030, Towards Eliminating Preventable Harm in Health Care*. Available from: <https://www.who.int/teams/integrated-health-services/patient-safety/policy/global-patient-safety-action-plan>
2. Shahian D, *I-PASS handover system: a decade of evidence demands action*, BMJ Quality & Safety, 23 April 2021. doi: 10.1136/bmjqs-2021-013314

The problem.

Collaboration, communication and handover are poorly controlled risks in healthcare.

Wherever they work, healthcare practitioners and leaders take these risks seriously. Errors are avoided because of their commitment and focus on patient safety.

But the systems in which they operate are letting them down.

Without the right collaboration platform, staff and patients are left with inadequate, manual and informal systems.

Sticky notes, whiteboards and handover sheets – even when supported by traditional electronic patient record (EPR) systems – do not adequately support effective communication during handover.

And poor communication is a huge problem.

10%

of patients admitted to hospital suffer preventable harm as a result of poor communication.³

80%

of serious incidents in hospitals are due to failures in handover.⁴

52%

of NHS staff feel unable to meet conflicting demands on their time. Inefficient handover is a significant contributor to their load.⁵

18%

is the estimated prevalence of preventable patient harm reported in intensive care.⁶

3. World Health Organization. 2019. *Patient Safety Fact File*. Available from: https://www.who.int/features/factfiles/patient_safety/patient-safety-fact-file.pdf
4. Lee SH, Phan PH, Dorman T, Weaver SJ, Pronovost PJ. *Handoffs, safety culture, and practices: evidence from the hospital survey on patient safety culture*. BMC Health Serv Res. 2016;16:254. Published 2016 Jul 12. doi:10.1186/s12913-016-1502-7
5. NHS England & The Survey Coordination Centre. 2020. *NHS Staff Survey 2020*. NHS. Available from: <https://www.nhsstaffsurveys.com/results/>
6. Panagioti M, Khan K, Keers R N, Abuzour A, PhippsD, Kontopantelis E et al. Prevalence, severity, and nature of preventable patient harm across medical care settings: systematic review and meta-analysis BMJ 2019; 366 :l4185 doi:10.1136/bmj.l4185

The solution.

A software platform that is revolutionising communication and collaboration.

Safer for patients, more efficient for healthcare practitioners

CAREFUL is a revolutionary communication tool that enables collaboration within and between teams through shared visibility of tasks and unambiguous accountability for actions.

CAREFUL replaces a patchwork of inadequate, informal and manual systems with a single user-friendly platform.

All relevant tasks in a patient's care can be planned, tracked, recorded, shared and handed over between individuals, teams and organisations.

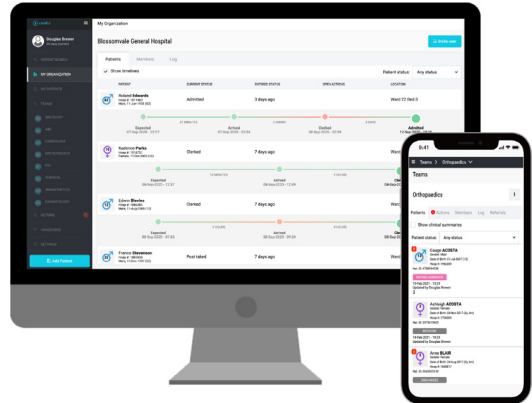
Patient safety is improved because **nothing is lost or forgotten.**



All healthcare settings must have systems in place for safe and thorough handover of patients between clinical teams and between shifts, with safe intra-hospital patient transfer.”

World Health Organization, 2020⁷

7. Standard C.1.1.5, *Patient Safety Assessment Manual*. 3rd ed. Cairo: World Health Organization; 2020. P15



Accountability

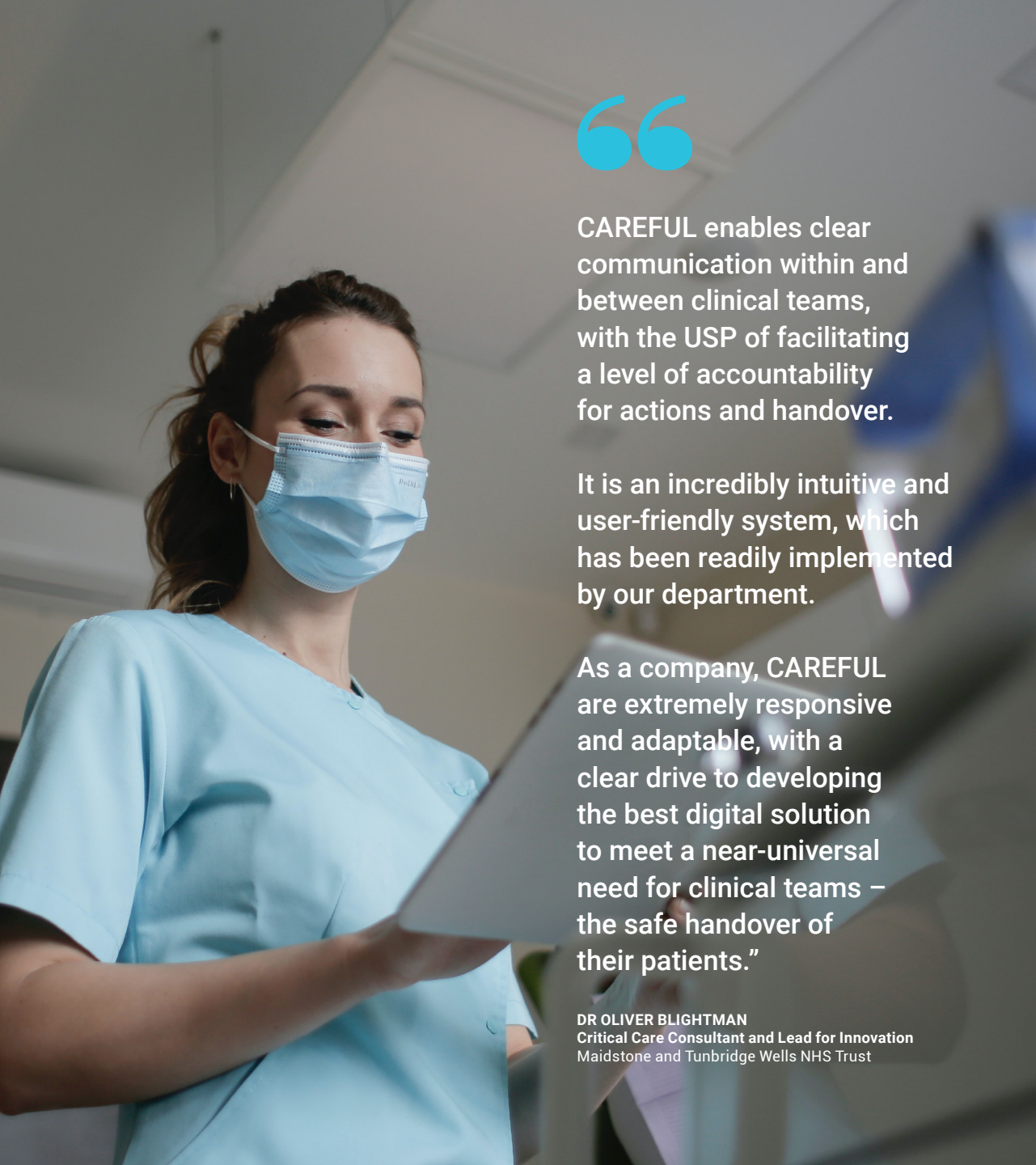
CAREFUL provides you with a list of required actions recorded against each patient. This shared care-plan creates single-point accountability for clinical actions.

Visibility

CAREFUL shows you exactly which members of each multi-disciplinary team are responsible for the patient's care. This provides visibility over who is looking after the patient right now.

Collaboration

CAREFUL enables you to send, receive and share responsibility for patient care safely and confidentially during peer-to-peer handover, internal referrals, discharges and transfers between organisations.



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CAREFUL enables clear communication within and between clinical teams, with the USP of facilitating a level of accountability for actions and handover.

It is an incredibly intuitive and user-friendly system, which has been readily implemented by our department.

As a company, CAREFUL are extremely responsive and adaptable, with a clear drive to developing the best digital solution to meet a near-universal need for clinical teams – the safe handover of their patients.”

DR OLIVER BLIGHTMAN
Critical Care Consultant and Lead for Innovation
Maidstone and Tunbridge Wells NHS Trust

Levels.

Clinical collaboration that takes place in three communication contexts.



Peer-to-peer handover

When responsibility is passed between individuals within your teams, usually at set times such as shift end.



Internal referrals

When teams or working groups in your organisation pass or share responsibility.



Discharges and transfers between organisations

When you refer or move a patient to another organisation in order to change the level or type of care provided.

Implementation.

CAREFUL mirrors clinical collaboration, so you can implement one step at a time.



A single team

You can start by implementing CAREFUL within a single team, radically improving peer-to-peer handover and quickly deliver proof of concept.



Multiple teams

As your needs grow, you can add other teams, departments and wards. Once everyone is connected, internal referrals are streamlined and the benefits accrue across the whole organisation.



Multiple organisations

When multiple organisations adopt CAREFUL, your discharges and transfers become seamless. This is safer for patients, less costly for hospitals, easier and more efficient for healthcare practitioners.

Patient flow.

CAREFUL automatically audits patient flow so problems can easily be identified and resolved.

CAREFUL allows you to assign a status to each patient showing where they are in their journey; from 'awaiting admission' to 'discharged'.

The people responsible for patient flow – managers and leaders – can see the plans for each individual patient and how they relate to the patient's overall journey.

This makes it easy for them to get a snapshot of the whole hospital, in real time.

With this information, managers and leaders can coordinate with care teams to **solve problems with patient flow**.

Improved patient flow means fewer costly delays for hospitals and less risk associated with lengthy stays for patients.



A worked example

3%

reduction in
length of stay

Assumptions

- 100 bed hospital
- Existing average LOS = 3 days
- £2,000 average revenue/tariff per patient
- £400/night blended cost

Financial opportunity

- Prevent 1 in 10 patients overstaying by 1 night
- New average LOS = 2.7 days
- Cost-saving opportunity = £1.4m
- Revenue opportunity = £2.7m

Benefits.

CAREFUL meets the needs of clinicians, and ensures hospitals see efficiency and good governance in the delivery of care.

The CAREFUL platform is a turnkey solution to a harmful problem, available through easy and affordable subscription.

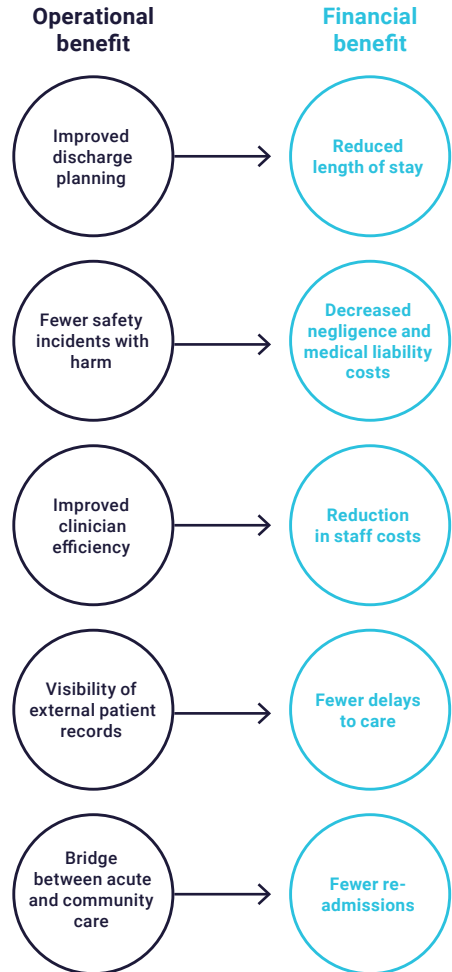
You can implement it using a team-by-team approach providing a focus for visibility, accountability and collaboration around the patient plan. CAREFUL enables seamless peer-to-peer handover, auditable internal referrals and highly visible discharge planning.

With improved patient safety at its core, the CAREFUL platform creates more efficient ways of working for healthcare practitioners and delivers real financial and operational returns for healthcare institutions.



All healthcare settings must have systems in place for safe and thorough handover of patients between clinical teams and between shifts, with safe intra-hospital patient transfer.”

World Health Organization, 2020⁷



Information governance.

CAREFUL addresses governance concerns with industry standard privacy and data controls.

Without access to the right communications tools, the wrong ones often creep into handover. Unauthorised messaging apps are not only unfit for purpose, they also lack appropriate privacy and data controls.

CAREFUL is hosted on Microsoft servers, protected by end-to-end encryption, and designed with privacy in mind.

Our 'privacy by design' methods ensure that **patient data is secured both from within and without.**

Because CAREFUL is an API-driven platform, it integrates easily with existing EPR systems. Data can be moved both to and from legacy systems, safely and securely.

Importantly, implementation of the CAREFUL platform within organisations is scalable without relying on any internal IT support.



Complies with NHS Data Security and Protection Toolkit



Designed for HIPAA and other data regulations



GDPR compliant



UK Government approved G-Cloud supplier



Hosted on Microsoft Azure



Data is fully encrypted at rest and in transit



No data stored on local machines or mobile devices



Users only see patients assigned to their team



All activity is stored as a full log to provide an audit trail

Our credo.

CAREFUL was born out of the personal experiences of our founder and his team.



Error and patient harm are shamefully common in healthcare. This is not the fault of the practitioners who struggle every day to keep patients safe. It is the inadequacy, poverty and poor design of the systems which surround them.

Like so many, I have personally seen and been affected by poor communication in healthcare.

As a practitioner, I came perilously close to killing a child because of an out-of-date insulin protocol; as a relative, I saw my mother take months to recover because a hospital forgot to instigate a fluid-balance chart; and as a patient myself, my past medical history was inaccurately recorded during a pre-op assessment.

Every member of my team – and almost all staff and patients with whom I speak – have similar stories to tell, most, thankfully telling of near-misses rather than significant harm.

I have spent many years as a senior practitioner and more lately as a hospital leader, trying to address patient safety through improved protocols, cultural development and systems implementation.

The whole team at CAREFUL is dedicated to creating a solution that radically improves the communication and process that surrounds clinical collaboration and handover.

We strongly believe that this remains one of the most important, yet least recognised, risks to the safety of patients.

CAREFUL is a platform which promotes task-based accountability and visibility in the planning of care. We believe that this will help practitioners to provide **the right care at the right time to the right patient, every time.**"



Dr DJ Hamblin-Brown FRCEM
Founder, CEO & Clinical Safety Officer

CASE STUDY.

Making handover safe in the ICU.



NHS
Maidstone and
Tunbridge Wells
NHS Trust

Background

CAREFUL supports the wider ICU team in the planning and handover of complex critical care patients at a multi-site NHS hospital trust.

The problem

The clinical state of critical care patients changes constantly. Global evidence shows that the prevalence of preventable harm is three times higher in the ICU than in the rest of the hospital.

Doctors and staff from many disciplines need to contribute to complicated decisions quickly, sometimes when not present on the unit.

A complex, forward-looking plan is required for each patient, which must be easily accessible to all members of this multidisciplinary team. The plan needs to be acted on in real-time, together and alterable as needed.

At Maidstone and Tunbridge Wells, senior doctors realised that patient safety would be enhanced, and substantial staff time would be saved, if all team members could see the same critical patient information at the same time, wherever they were.

They also realised that ICU patients being supported on other wards through clinical outreach, or stepped down to the ward, were at higher risk because of difficulty in maintaining clinical oversight of patients outside the unit.

Existing systems were not agile, flexible or mobile enough to provide this.

The CAREFUL solution

CAREFUL is a secure app that has allowed all members of the entire multidisciplinary team to collaborate in real time.

Everyone can see and manage critical information and tasks for patients and visualise the state of the patient and their journey through the unit.

CAREFUL has standardised communication by replacing inadequate systems, as well as informal paper and verbal instructions.

By using its handover functionality, staff going off shift are able to transfer responsibility of critical tasks with full visibility, while actions are logged.

CAREFUL has saved hundreds of hours of time and made safe thousands of handovers by making key information visible to consultants, nurses and AHPs across both sites.

Staff report high impact



Percentage of staff reporting positive impact from installing CAREFUL:

Staff efficiency/time-saving	91.4%
Within-team communication	100%

Anonymous and confidential user feedback survey after 1 month of use.



Having used CAREFUL, I believe that it would benefit every care team in the NHS.”

DR JOHANN GRUNDLINGH, FRCEM FFICM MBA
Critical Care and Emergency Medicine Consultant
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