

Virtual visiting & family communication:  
lessons learnt from the pandemic to  
optimize family-centred care of the future

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Research Director: Prolonged-ventilation Weaning Centre, Michael Garron Hospital, Toronto, Canada

WHAT WE KNEW BEFORE THE  
PANDEMIC....

Family members want to be involved in care delivery,  
decision making, ICU rounds

## Guidelines for Family-Centered Care in the Neonatal, Pediatric, and Adult ICU

(Crit Care Med 2017; 45:103–128)

### *Family-centered care*

Approach that  
is respectful  
of and  
responsive to  
individual  
families' needs  
and values

- Open & flexible bedside presence
- Participation in rounds
- Presence during resuscitation

- Family education/resources
- Decision support tools
- Interprofessional family conferences

- Communication based on VALUE
- Value family statements
- Acknowledge emotions
- Listen
- Understand the patient as a person
- Elicit questions

Improves family member satisfaction & relationships with us

# Flexible open visiting improves family outcomes compared to restricted closed visiting

## Effect of Flexible Family Visitation on Delirium Among Patients in the Intensive Care Unit

The ICU Visits Randomized Clinical Trial

[JAMA](#). 2019 Jul 16; 322(3): 216–228.

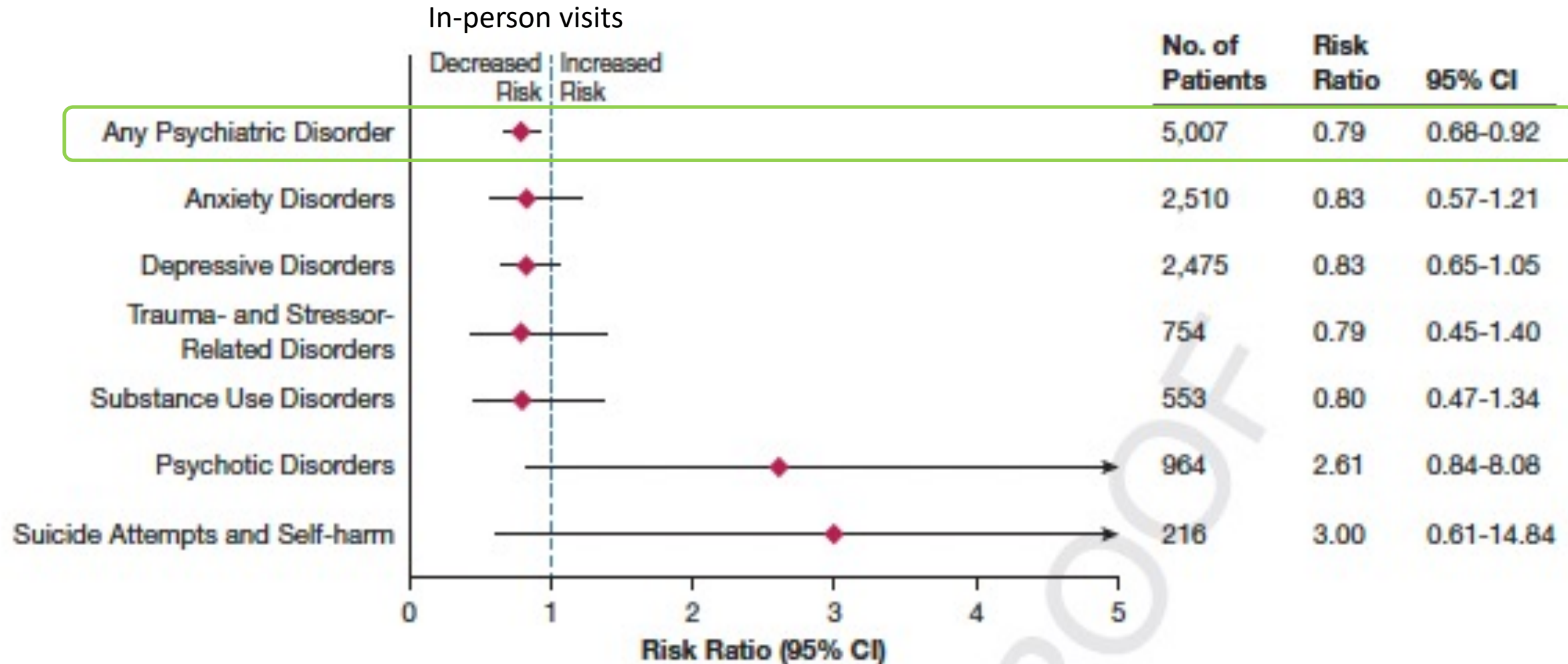
	Flexible visitation	Restricted visitation	Adjusted difference <sup>a</sup> (95%CI)	Flexible visitation prevalence ratio (95%CI <sup>a</sup> )	P-value <sup>a</sup>
Possible anxiety, <sup>b</sup> no./total no. (%)	171/529 (32.3)	260/525 (49.5)	-16.9 (-24.6 to -9.1)	0.66 (0.54 to 0.80)	<0.001
Probable anxiety, <sup>b</sup> no./total no. (%)	71/529 (13.4)	148/525 (28.2)	-14.6 (-20.8 to -8.3)	0.48 (0.35 to 0.66)	<0.001
Possible depression, <sup>b</sup> no./total no. (%)	133/529 (25.1)	186/525 (35.4)	-9.9 (-18.3 to -1.6)	0.72 (0.55 to 0.94)	0.01
Probable depression, <sup>b</sup> no./total no. (%)	43/529 (8.1)	93/525 (17.7)	-9.5 (-15.3 to -3.7)	0.46 (0.28 to 0.76)	0.001
HADS anxiety score adjusted by history of anxiety, <sup>c</sup> median (IQR) [no.]	6.0 (3.0-8.2) [520]	7.0 (4.0-11.0) [522]	-1.7 (-2.4 to -1.0)	-	<0.001
HADS depression score adjusted by history of depression, <sup>d</sup> median (IQR) [no.]	4.0 (2.0-8.0) [518]	5.0 (2.0-9.0) [521]	-1.2 (-2.1 to -0.4)	-	<0.001

# Psychiatric Outcomes in ICU Patients With Family Visitation

A Population-Based Retrospective Cohort Study



N = 14,344 patients surviving to hospital dx: 573 (4%) had no in-person ICU visits



WHAT WE LEARNT DURING THE  
PANDEMIC....

Jan-March 2020 rapidly evolving,  
profoundly distressing & never  
experienced before situation

# The Guardian

## UK hospitals tightening restrictions on visits - even to dying patients

Some hospitals are supplying iPads and phones to help visitors say goodbyes to loved ones dying from coronavirus

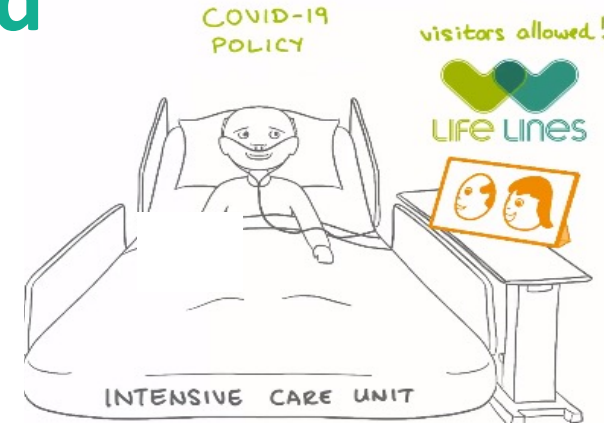
- Coronavirus - latest updates
- See all our coronavirus coverage



▲ St Thomas' hospital is one of the facilities only considering requests for visits to terminally ill people on a case-by-case basis. Photograph: Anadolu Agency/Anadolu Agency via Getty Images



# A two-week ultra-rapid development timeline



**18 March** | Rapid testing of aTouchAway in ICU

**17 March** | Lack of suitable other options – accelerated reconfiguration of aTouchAway

**15 March** | Virtual meeting with Michel Paquet (CEO of Aetonix (aTouchAway))

**25 March** | 1<sup>st</sup> successful use of ATouchAway for bedside video call with husband of intubated patient

**14 March** | Looking for virtual visiting solutions

**23 March** | 1<sup>st</sup> contact with UK telecoms/mobile companies requesting support for nationally scalable solution

**31 March** | First 50 Life Lines tablets delivered to GSTT

**13 March** | Default no-visit policy instituted in ICU



**27 March** | Confirmed offer of philanthropic support (True Colours Trust and Gatsby Foundation)

**30 March** | King's College London identified as partner charity, with King's Health Partners confirmed as host institution

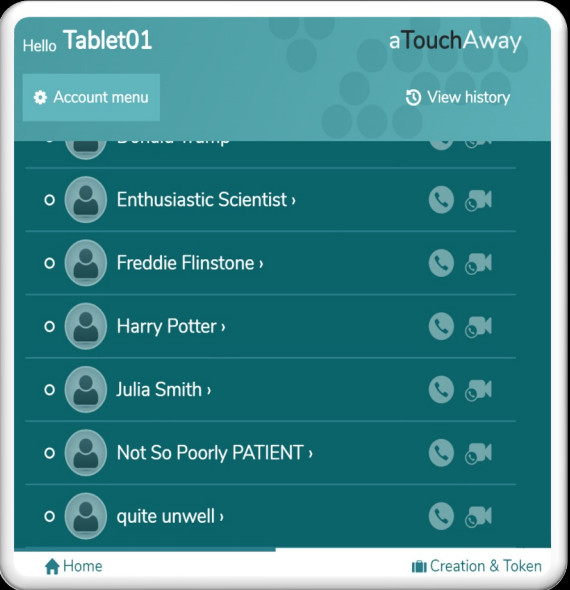


**14 March** | NHSX publication of COVID19 Information Governance Advice for health and care professionals

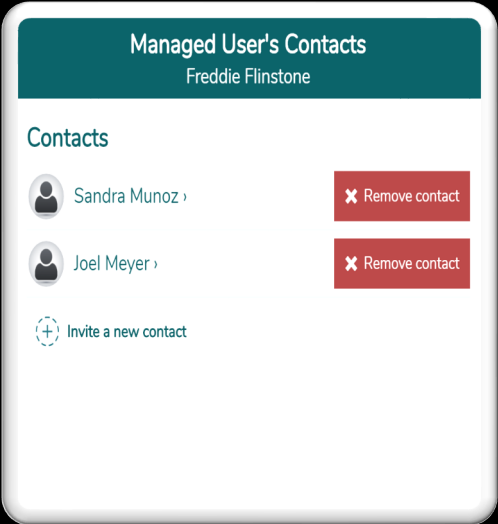
**25 March** | BT and Google emerge as principal commercial partner for national solution

# The UK Life Lines Solution

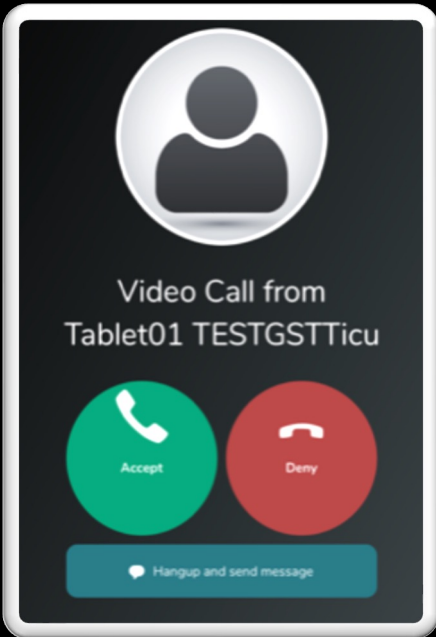
## List of patients



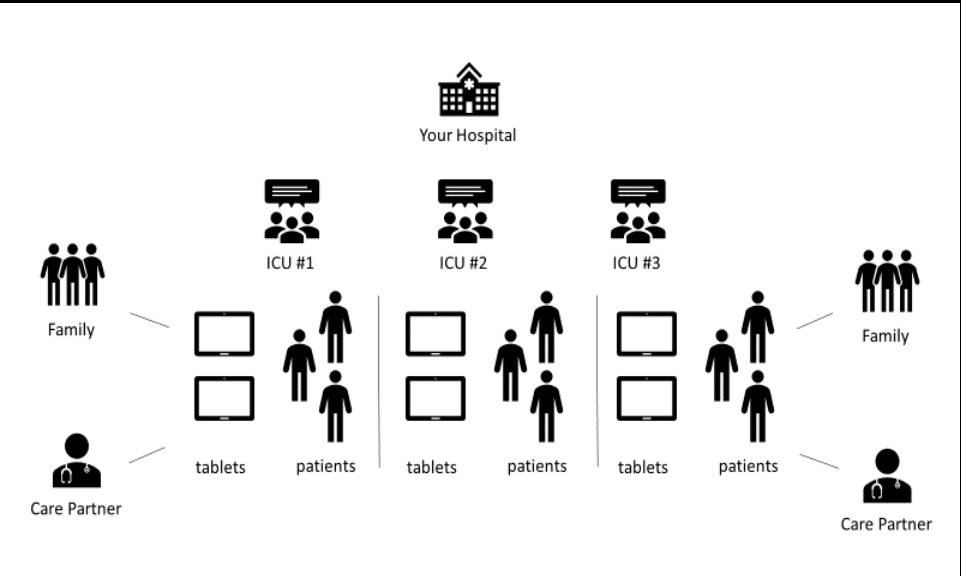
## List of personal contacts



## Secure online video calling platform



## List of units



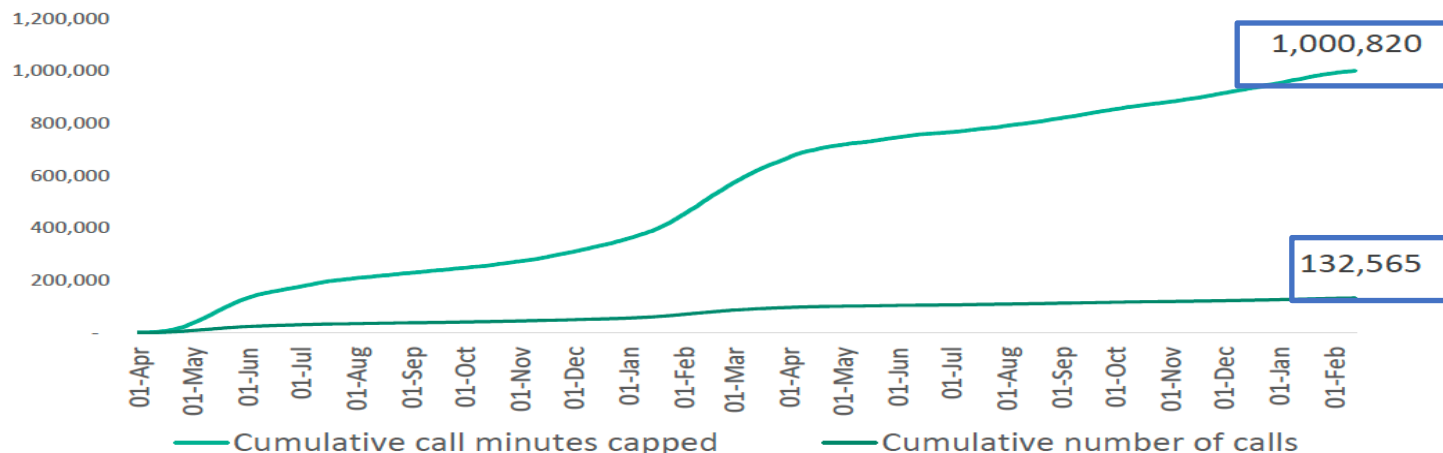
## Video call in progress



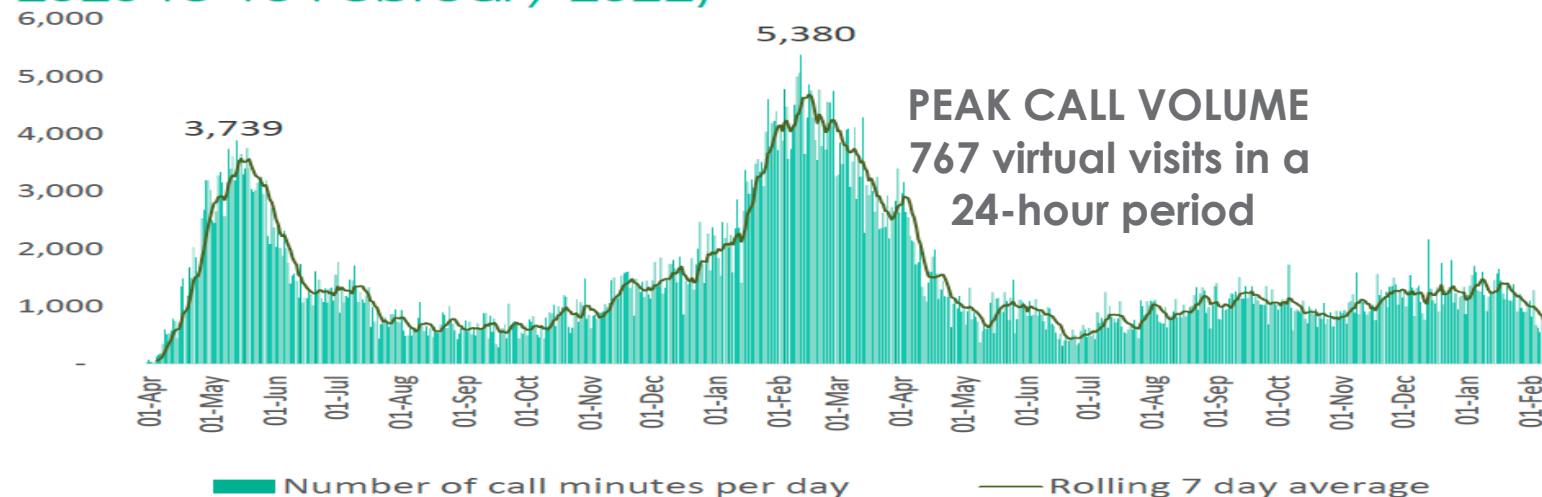
Provided **1,402** Android devices to **180** NHS hospitals across all 4 UK countries



Cumulative number of calls and call minutes  
(30 March 2020 to 13 February 2022)



Number of call minutes per day (30 March 2020 to 13 February 2022)



# Communication and Virtual Visiting for Families of Patients in Intensive Care during the COVID-19 Pandemic

## A UK National Survey

3 Louise Rose<sup>1</sup>, Lisa Yu<sup>2</sup>, Joseph Casey<sup>2</sup>, Amelia Cook<sup>3</sup>, Victoria Metaxa<sup>4</sup>, Natalie Pattison<sup>5</sup>, Anne Marie Rafferty<sup>1</sup>, Pam Ramsay<sup>6</sup>, Sian Saha<sup>4</sup>, Andreas Xyrichis<sup>1</sup>, and Joel Meyer<sup>7</sup>

Ann Am Thorac Soc Vol 18, No 10, pp 1685–1692, Oct 2021

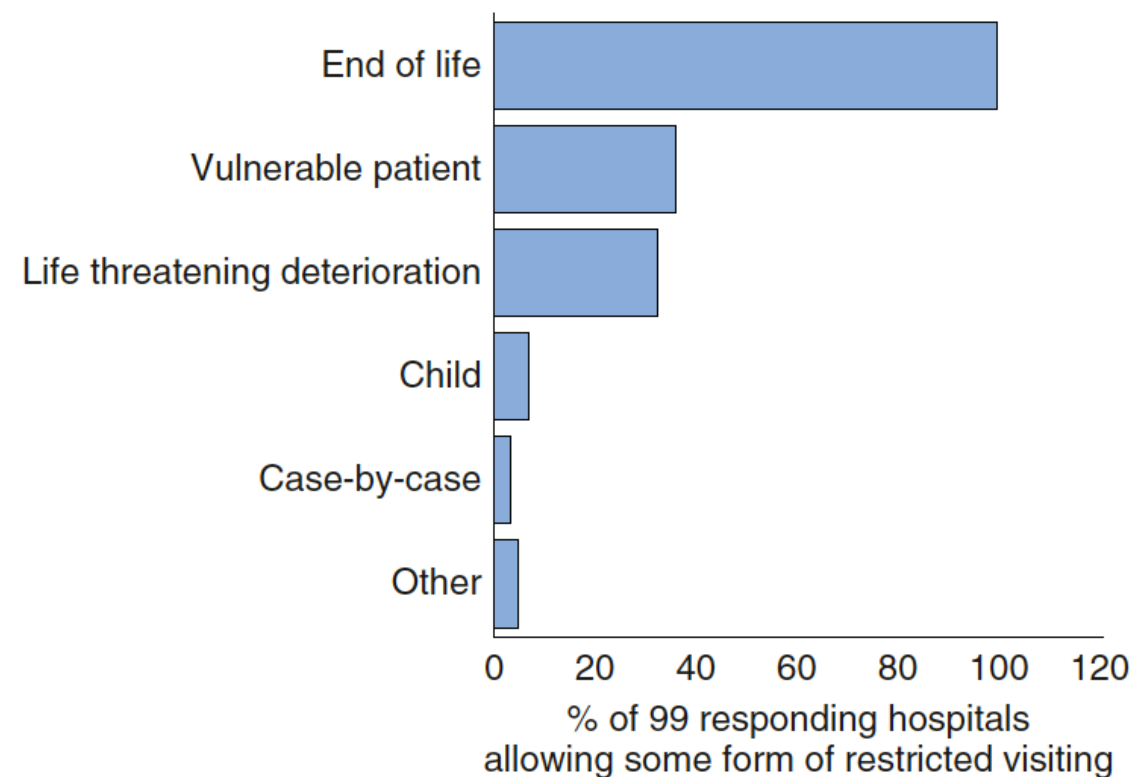


**117 hospitals** responded (**54% response rate**), representing **180 ICUs**

### VIRTUAL VISITING

Indication to Use	n (%)
Alert and oriented patients	95 (88)
Patients at the end of life	68 (63)
Mechanically ventilated patients	64 (59)
During rehabilitation activities	56 (52)
Alert but disoriented patients	49 (45)
Unconscious or sedated patients	49 (45)
Based on consent	4 (4)
Virtual visiting not conducted	4 (4)
Other <sup>†</sup>	2 (2)

### IN-PERSON VISITING



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Ann Am Thorac Soc Vol 18, No 10, pp 1685–1692, Oct 2021



### Benefits (N = 105 Hospitals) n (%)

Reduces patient psychological distress 82 (78)

Improves staff morale 71 (68)

Reorients patients with delirium 49 (47)

### VIRTUAL VISITING

Surmounts communication or language difficulties 47 (45)

Improves patient engagement with rehabilitation or physiotherapy 46 (44)

Enhances patient-centered care 2 (2)

Other 2 (2)

### Barriers n (%)

#### Family-related barriers

Family inability to use technology or access a device 56 (53)

Family concerns or preferences 17 (16)

#### System-related barriers

No staff time to enable video call 49 (47)

Difficulties with 4G or Wi-Fi connectivity 40 (38)

Lack of training 38 (36)

Staff concerns about video call security and privacy 28 (27)

Staff concerns about video calls without prior patient consent 28 (27)

Lack of IT team support 23 (22)

Concerns from information governance and security 20 (19)

Insufficient devices 18 (17)

No dedicated family communication team 16 (15)

No written guidance 15 (14)

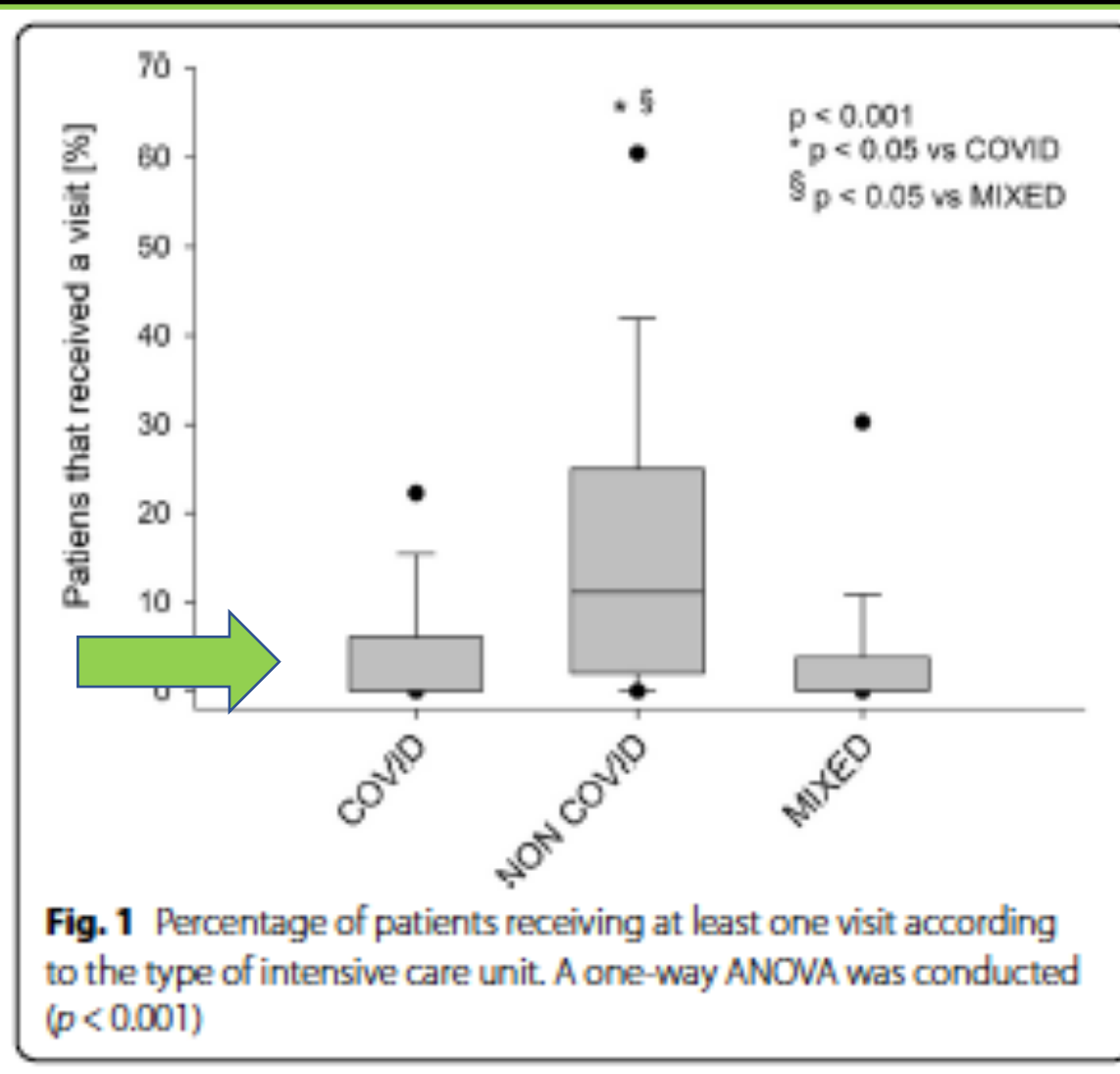
Language barriers and difficulty accessing interpreting services 12 (11)

Lack of management or hospital leadership support 5 (5)

Other 6 (6)

# Communication and visiting policies in Italian intensive care units during the first COVID-19 pandemic wave and lockdown: a nationwide survey

Langer et al. BMC Anesthesiology (2022) 22:187

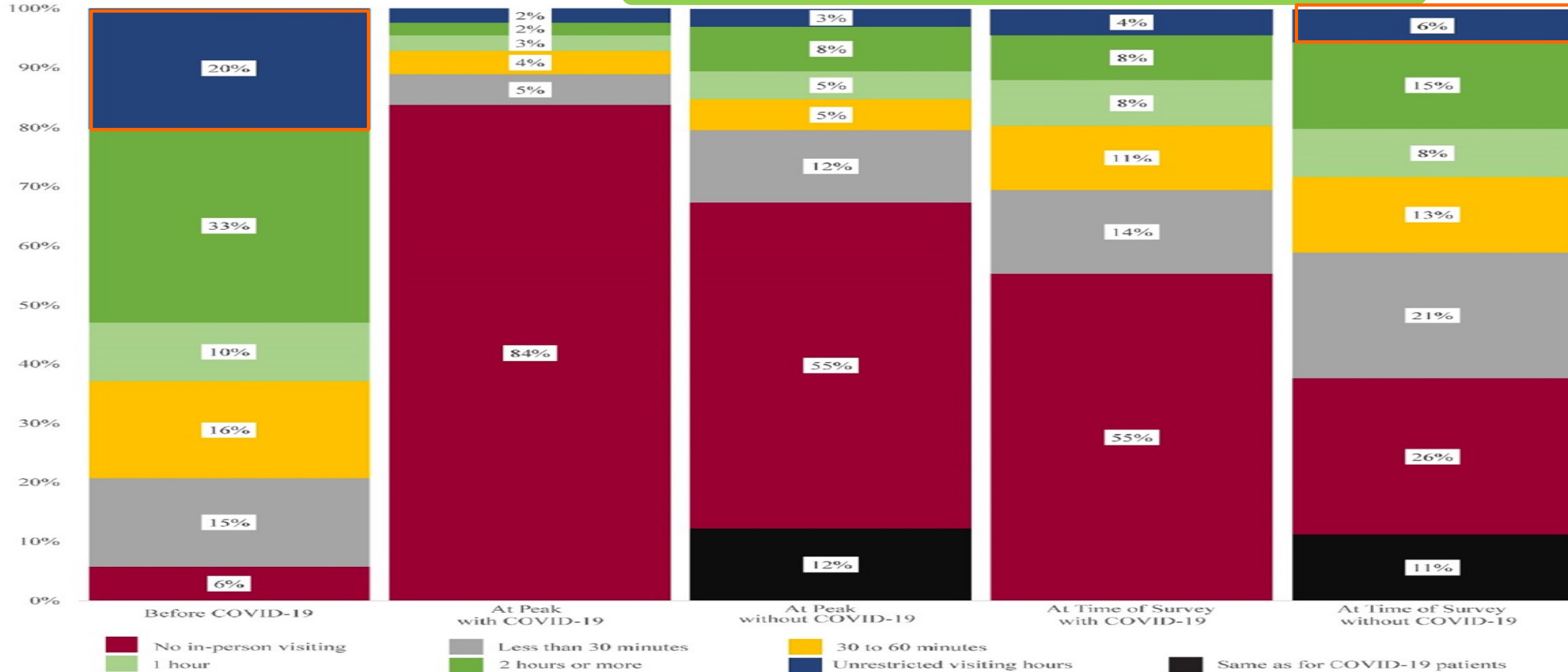


	Prepandemic	First pandemic wave	p-value
Use of electronic devices for physician - family communication - n (%)	123 (75)	191 (95)	<0.001
Kind of electronic device used	/123	/191	<0.001
Voice call - no. (%)	108 (88)	152 (75)	
Video call - no. (%)	21 (17)	105 (52)	
Other device - no. (%)	10 (8)	11 (5)	
Use of electronic devices for patient- family communication - n (%)	83 (51)	162 (80)	<0.001
Patients have free access to personal electronic devices - n (%)	101 (62)	188 (93)	<0.001
Communication between patient and family occurs			<0.001
Daily - no. (%)	147 (90)	132 (65)	
2-3 times per week - no. (%)	7 (4.5)	33 (16)	
On occasion - no. (%)	7 (4.5)	25 (12)	
Never - no. (%)	2 (1)	12 (6)	

# Variation in communication and family visiting policies in intensive care within and between countries during the Covid-19 pandemic: The COVISIT international survey

Journal of Critical Care 71 (2022) 154050

667 ICUs representing all continents



# Variation in communication and family visiting policies in intensive care within and between countries during the Covid-19 pandemic: The COVISIT international survey

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667 ICUs representing all continents

Communication and support for relatives at time of survey.	
Family support	n (%)
ICU information booklet contains information on COVID-19	n = 667
Not available	382 (57)
Digital format only	122 (18)
Physical format (booklet)	122 (18)
Both (digital + physical formats)	41 (6)
Mode of delivery of general or daily updates <sup>a</sup>	n = 646
In person at bedside (within visiting restrictions)	143 (22)
In person, but outside the ICU clinical area.	230 (36)
In person, but outside of the hospital and outdoors	26 (4)
On the phone, on family's request	279 (43)
On the phone, families called at regular intervals by ICU staff	353 (55)
Via virtual/video-conferences	130 (20)
Formal meetings or discussions regarding prognosis, treatment plans or end of life care <sup>a</sup>	n = 615
In person in the same place as before COVID-19	230 (37)
In person but in an area dedicated to meetings setup since COVID-19	176 (29)
Outside of the building, outdoors	36 (6)
Via video-conference	103 (17)
Over the phone	306 (50)

Virtual / video visiting	n = 667
Is not available	249 (37)
Is available, but use is not protocolized	326 (50)
Is available, and use is protocolized	92 (14)
Which devices are used for virtual visiting? <sup>a</sup>	n = 418
Personal devices provided by staff members	102 (24)
Personal devices provided by patients or their relatives	180 (43)
Computers that are also used for patient care / clinical information systems	30 (7)
Devices dedicated to virtual visiting and not used for something else	279 (67)
Devices usually dedicated to virtual clinical rounds repurposed for virtual visiting	31 (7)
How is virtual visiting organized? <sup>a</sup>	n = 402
Staff organized appointments offered to relatives on a regular basis	138 (34)
Staff organized appointments when requested by the doctor or nurse	153 (38)
Appointments organized when requested by relatives	223 (55)
Virtual visiting initiated on request from a relative or patient (no appointment)	176 (44)
How frequently do you use virtual visiting?	n = 418
Daily or almost daily for most patients	111 (27)
Several times per week for most patients	126 (30)
Not more than once a week for most patients	47 (11)
Infrequently, only for a few patients	128 (31)
Never	6 (1)

# Other pandemic related communication initiatives

## The Role of a Liaison Team in ICU Family Communication During the COVID 19 Pandemic

Carmen LopezSoto, MD, Eleanor Bates, MD, Charlotte Anderson, MD, Sian Saha, MA, Laura Adams, MD, Alex Aulakh, MD, Francesca Bowtell, MD, Marie Buckel, MD, Thomas Emms, MD, Moustafa Shebl, MD, and Victoria Metaxa, PhD

*e112 Journal of Pain and Symptom Management*

## Nurse perceptions of a nurse family liaison implemented during the COVID-19 pandemic: A qualitative thematic analysis

Alyson Keen<sup>a,\*</sup>, Annie George<sup>a</sup>, B.T. Stuck<sup>a</sup>, Colby Snyder<sup>a</sup>, Kyle Fleck<sup>a</sup>, Jose Azar<sup>a,b</sup>, Areeba Kara<sup>a,b</sup>

*Intensive & Critical Care Nursing*

## COVID-19 Virtual visiting and other technological adaptations for critical care

*Future Healthcare Journal 2020 Vol 7, No 3: e93–5*

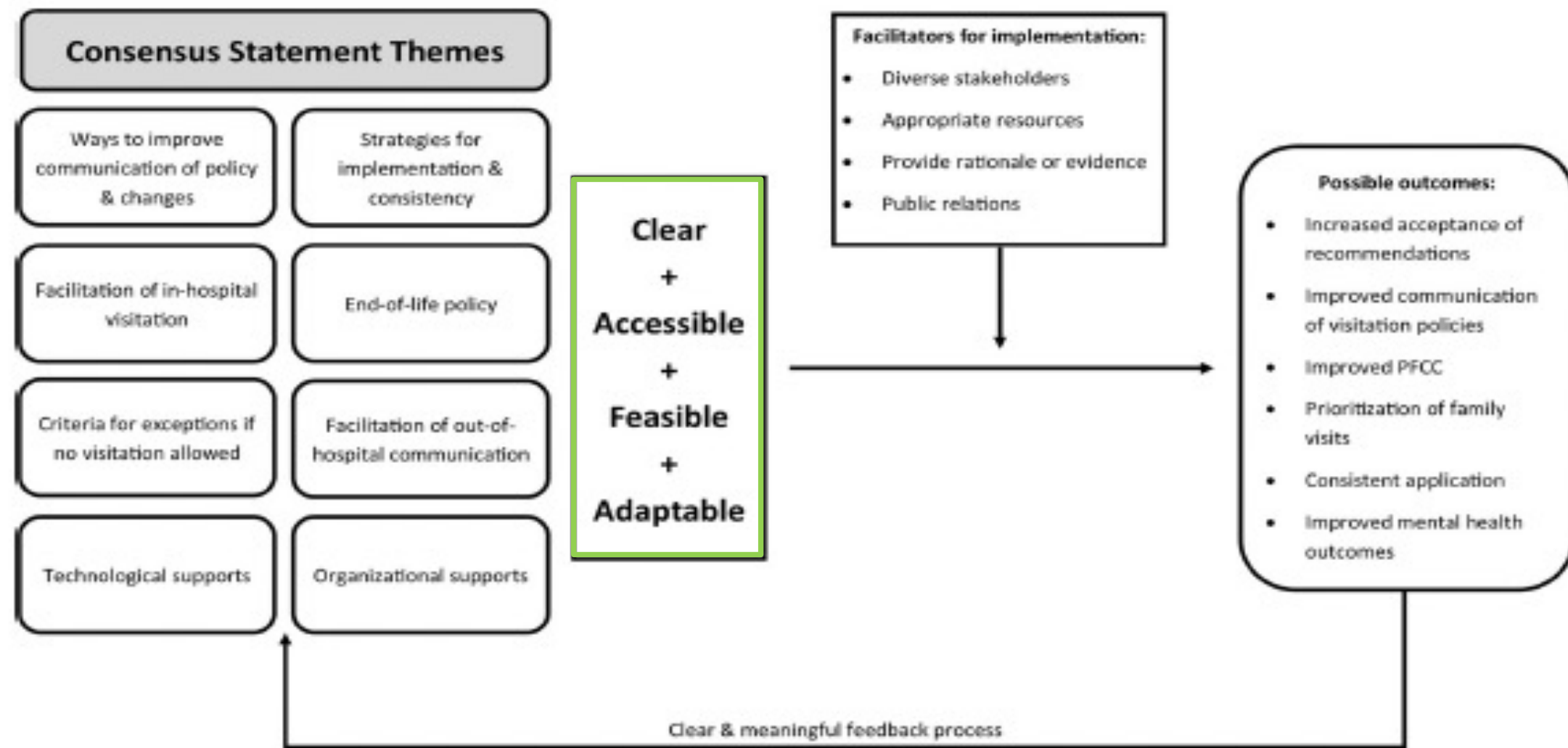
Authors: Hannah Webb,<sup>A</sup> Mark Parson,<sup>B</sup> Luke E Hodgson<sup>C</sup> and Khalil Daswani<sup>D</sup>

- Family communication/liaison teams
  - Non-ICU vs ICU trained members
  - Enabling virtual visiting and/or telephone communication updates
- Structured consultant led telephone rounds to family

# Evidence-informed consensus statements to guide COVID-19 patient visitation policies: results from a national stakeholder meeting

Can J Anesth/J Can Anesth

<https://doi.org/10.1007/s12630-022-02235-y>



# Symptoms of post-traumatic stress disorder (PTSD) in next of kin during suspension of ICU visits during the COVID-19 pandemic: a prospective observational study

Bjoern Zante<sup>1\*</sup>, Katja Erme<sup>1</sup>, Julia Grossenbacher<sup>1</sup>, Sabine A. Camenisch<sup>2</sup>, Joerg C. Schefold<sup>1</sup> and Marie-Madlen Jeitziner<sup>1,3</sup>

## Psychological effects of remote-only communication among reference persons of ICU patients during COVID-19 pandemic



Jessy Cattelan<sup>1</sup>, Sara Castellano<sup>2,3</sup>, Hamid Merdji<sup>1,4</sup>, Jean Audusseau<sup>5</sup>, Baptiste Claude<sup>1</sup>, Léa Feuillassier<sup>1</sup>, Sibylle Cunat<sup>1</sup>, Marc Astrié<sup>1</sup>, Camille Aquin<sup>1</sup>, Guillaume Buis<sup>1</sup>, Edgar Gehant<sup>1</sup>, Amandine Granier<sup>1</sup>, Hassiba Kercha<sup>1</sup>, Camille Le Guillou<sup>1</sup>, Guillaume Martin<sup>1</sup>, Kevin Roulot<sup>1</sup>, Ferhat Meziani<sup>1,4</sup>, Olivier Putois<sup>2,6,7†</sup> and Julie Helms<sup>1,7,8\*†</sup>

JAMA  
Network | **Open**<sup>™</sup>

Original Investigation | Critical Care Medicine

### Lived Experiences of Family Members of Patients With Severe COVID-19 Who Died in Intensive Care Units in France

Nancy Kentish-Barnes, PhD; Zoé Cohen-Solal, MS; Lucas Morin, PhD; Virginie Souppart, RN; Frédéric Pochard, MD, PhD; Elie Azoulay, MD, PhD

JAMA | Original Investigation | CARING FOR THE CRITICALLY ILL PATIENT

### Association of COVID-19 Acute Respiratory Distress Syndrome With Symptoms of Posttraumatic Stress Disorder in Family Members After ICU Discharge

Elie Azoulay, MD, PhD; Matthieu Resche-Rigon, MD, PhD; Bruno Megarbane, MD, PhD; Danielle Reuter, MD; Vincent Labbé, MD, PhD; Alain Cariou, MD, PhD; Guillaume Géri, MD, PhD; Guillaume Van der Meersch, MD; Achille Kouatchet, MD; Olivier Guisset, MD; Fabrice Bruneel, MD, PhD; Jean Reignier, MD, PhD; Virginie Souppart, RN; François Barbier, MD, PhD; Laurent Argaud, MD, PhD; Jean-Pierre Quenot, MD, PhD; Laurent Papazian, MD, PhD; Bertrand Guidet, MD, PhD; Guillaume Thiéry, MD; Kada Klouche, MD, PhD; Olivier Lesieur, MD, PhD; Alexandre Demoule, MD, PhD; Christophe Guitton, MD, PhD; Gilles Capellier, MD, PhD; Bruno Mourvillier, MD; Lucie Biard, MD, PhD; Frédéric Pochard, MD, PhD; Nancy Kentish-Barnes, PhD

# Psychological distress and morbidity of family members experiencing virtual visiting in intensive care during COVID-19: an observational cohort study

*Intensive Care Med*

<https://doi.org/10.1007/s00134-022-06824-9>



2,166 family members from 37 UK hospitals via virtual visiting platform

Prior to 1<sup>st</sup> virtual visit

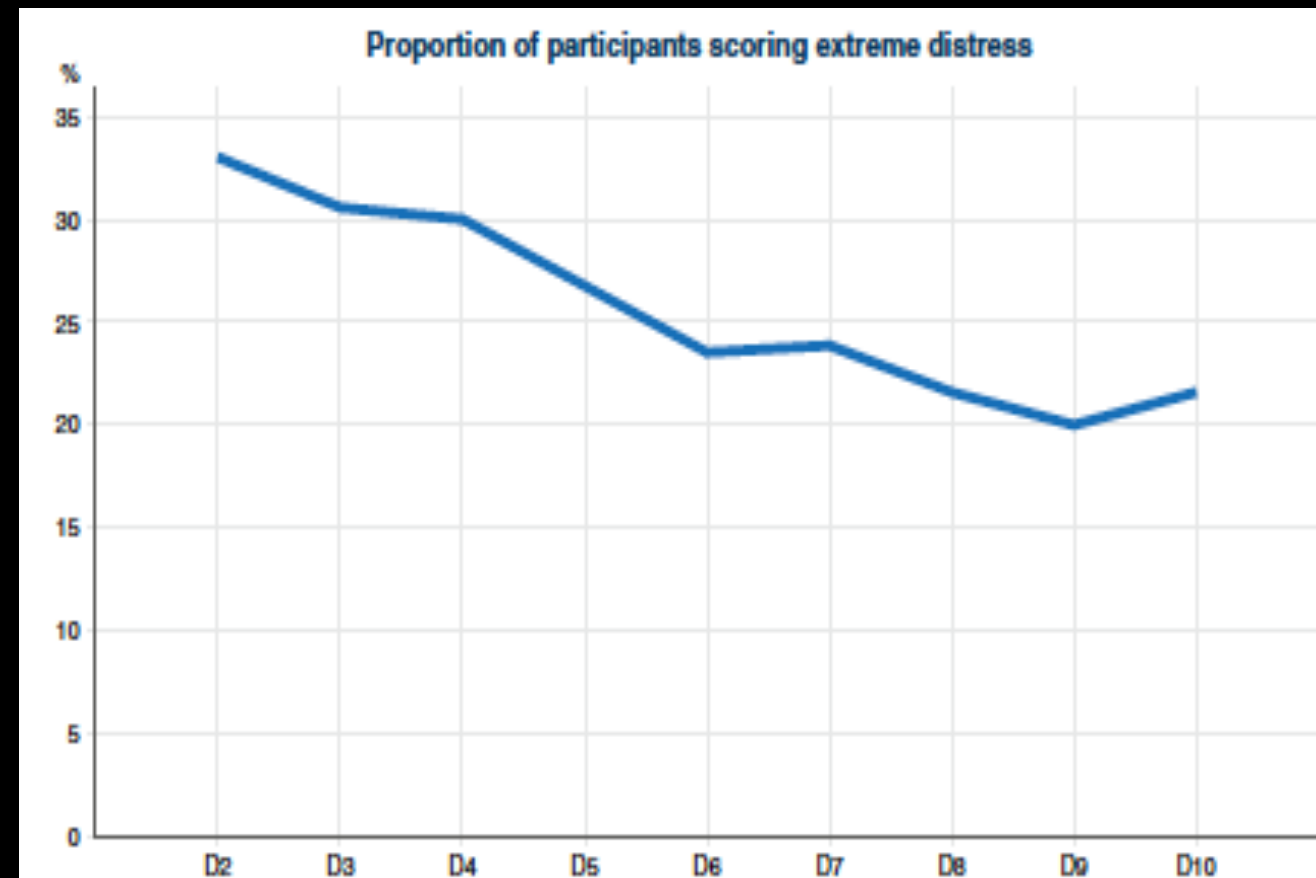
Distress Thermometer score = 7 (2.6)

1349 (62%) had severe distress

Following 1<sup>st</sup> virtual visit

Distress Thermometer score = 5.4 (3.1)

Mean (SD) difference from baseline  
1.6 (3.2)  $P < 0.001$



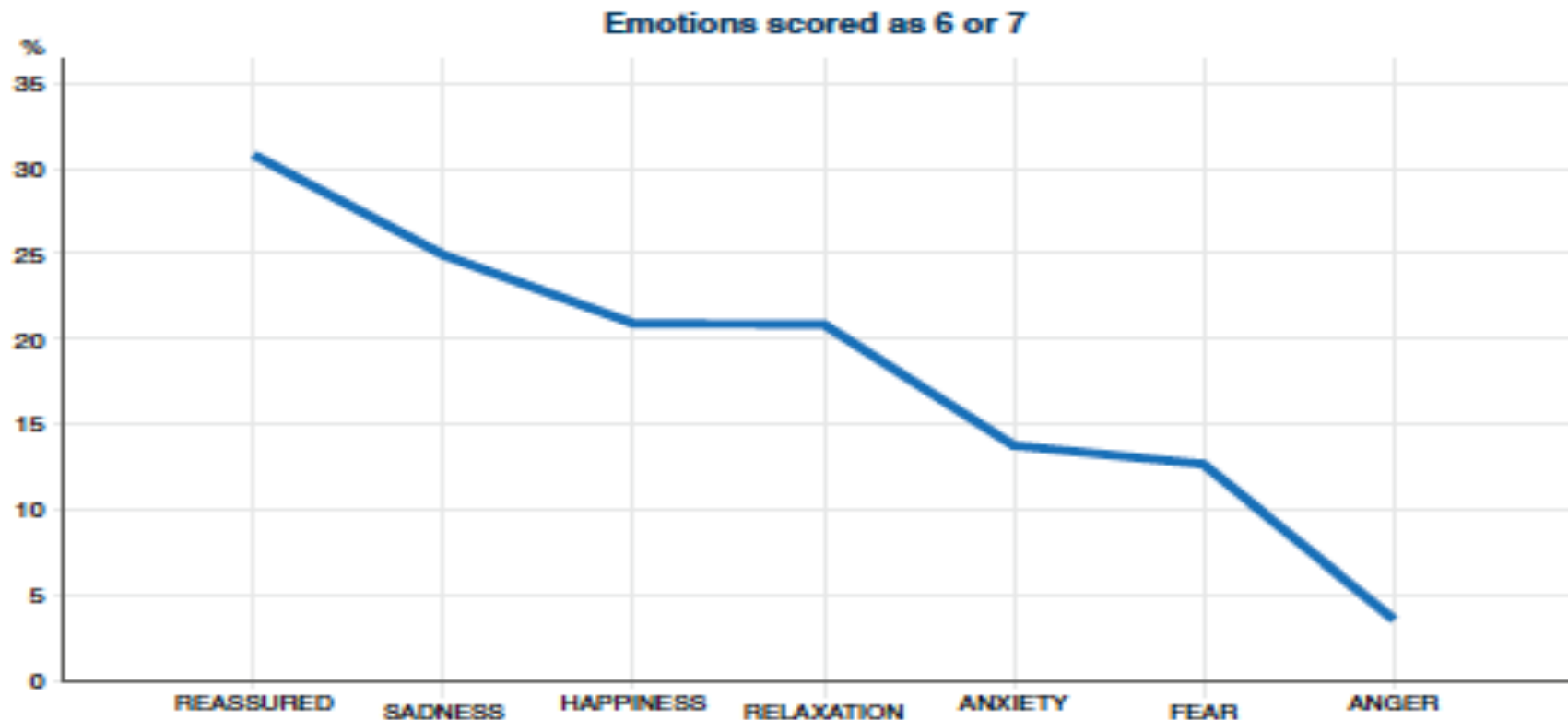
# Psychological distress and morbidity of family members experiencing virtual visiting in intensive care during COVID-19: an observational cohort study

*Intensive Care Med*

<https://doi.org/10.1007/s00134-022-06824-9>



1,249 family members rated emotions on a modified Discrete Emotion Questionnaire



Proportion of participants scoring each emotion as 6 or 7. A score of 6 or 7 indicates an emotion was experienced an extreme amount

# Virtual visiting in intensive care during the COVID-19 pandemic: a qualitative descriptive study with ICU clinicians and non-ICU family team liaison members

BMJ Open 2022;12:e055679. doi:10.1136/bmjopen-2021-055679



- 36 participants from 14 NHS hospitals
  - 17 (47%) ICU-trained clinicians/19 (53%) non-ICU-trained family liaison team members

## Theme - Restoring the family unit

the whole morning, she kept mouthing "E, E." And the family were like "what's she saying?" because she had a trachy in so she couldn't really communicate. So I said "oh she wants to see somebody beginning with an E." And they were like "oh that will be Evie" and the next thing a little dog comes running onto the screen, and she's touching it going "Evie, Evie." [Physician]

It was great because the wife and the children were in one screen and the brother was in another and they'd kind of talk amongst themselves but like, occasionally direct things at the patient. And that was amazing because I think it just provides, like, [...] the home environment and what it's normally like. (P17, female physician, non-ICU-experienced)

# Virtual visiting in intensive care during the COVID-19 pandemic: a qualitative descriptive study with ICU clinicians and non-ICU family team liaison members



*BMJ Open* 2022;12:e055679. doi:10.1136/bmjopen-2021-055679

- 36 participants from 14 NHS hospitals
  - 17 (47%) ICU-trained clinicians/19 (53%) non-ICU-trained family liaison team members

## Theme - Enabling sensemaking

often we'd be on the phone telling people, "Okay, they're on a kidney machine or a lung machine and this sort of stuff," but actually showing what the machines look like and a bit about intensive care generally helped them to realise the situation. it made everything we did a bit more real for the families, and so they could understand more what was going on. [Physician]

Family perspectives on facilitators and barriers to the set up and conduct of virtual visiting in intensive care during the COVID-19 pandemic: A qualitative interview study

INTENS CRIT CARE NUR 72 (2022) 103264



FACILITATORS

- 41 family members from 16 NHS hospitals

Theme - Virtual visiting is the next best thing

*“It was second best. To have been able to be there and just to hold his hand or something would have been brilliant. But because we couldn't, then this was the next best thing. It helped us manage and we really were so appreciative.”*  
(Participant 35-mother)

SET UP	CONDUCT
Preparing the family to see their loved one	ICU team member presence
Negotiating a time	Enabling family involvement in care
Easy to use technology	<b>Inclusivity</b>
	<b>Accessibility and flexibility</b>
	Sense of control

WHAT LESSONS SHOULD WE  
RETAIN FROM THE PANDEMIC....

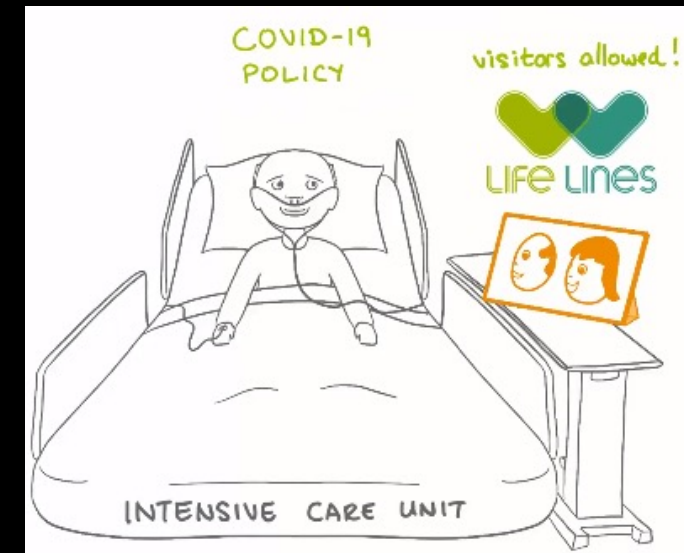
# LESSONS to TAKE FORWARD

Restrictions to in-person visiting result in patient and family psychological morbidity and decreased ability to facilitate family-centred care

Urgent need to return to pre-pandemic open visiting policies

Virtual ICU visiting is feasible and offers benefits that could be harnessed in non-pandemic times as an adjunct to in-person visiting

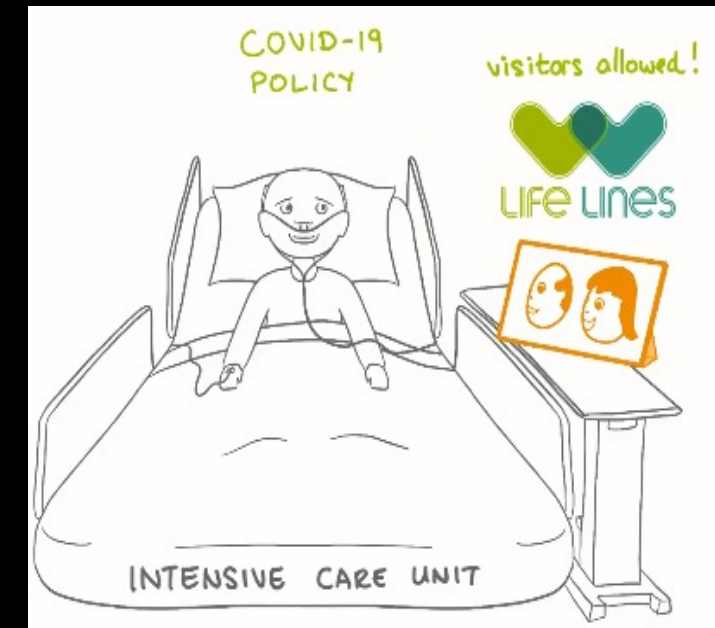
- Promotes increased accessibility and inclusivity for
  - family members unable to visit for geographic/personal reasons
  - large or geographically spread families to visit simultaneously
  - children/grandchildren/pets
  - enabling the patient a virtual visit home



# LESSONS to TAKE FORWARD

## Best practices (as recommended by family members) if conducting a virtual visit

- Prepare the family to see their relative
- Prepare the patient (if conscious)
- Negotiate a mutually convenient time
- Use easy to use (and secure) technology
- Have an ICU team member present to facilitate visit
- Use visit as a mechanism to involve family in care
- Consider camera positioning
- Need for call closure
- Need for family follow up/check in





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<https://www.kingshealthpartners.org/our-work/lifelines>



**THANK YOU  
FOR  
LISTENING**

**LIFE LINES**