

Translating Experience Gained from Inpatient Diabetes Care in the UK to India

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Disclosures

None

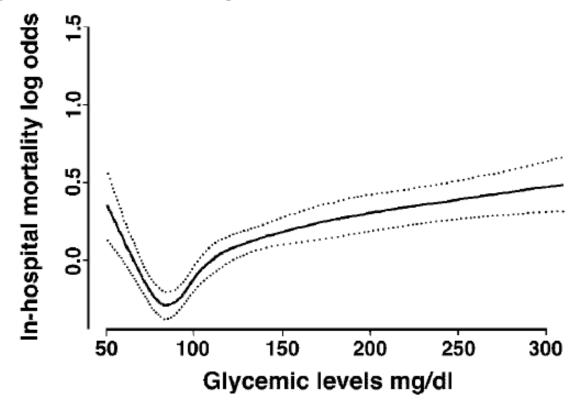
Who is This Strange Man?

- I qualified in 1991
- I trained in D&E and G(I)M in London
- I did general practice for 2 years
- I did ITU / anaesthetics for a year
- I did research at Mayo Clinic for 2 years on DHEA
- I have been in Norwich since 2004
- Currently my other roles include
 - Chair of the Association of British Clinical Diabetologists
 - Chair of the Specialist Clinical Exam in D&E
 - Immediate Past Chair of the Joint British Diabetes Societies for Inpatient Care
 - Immediate Past-President of the Endocrine Section of the Royal Society of Medicine





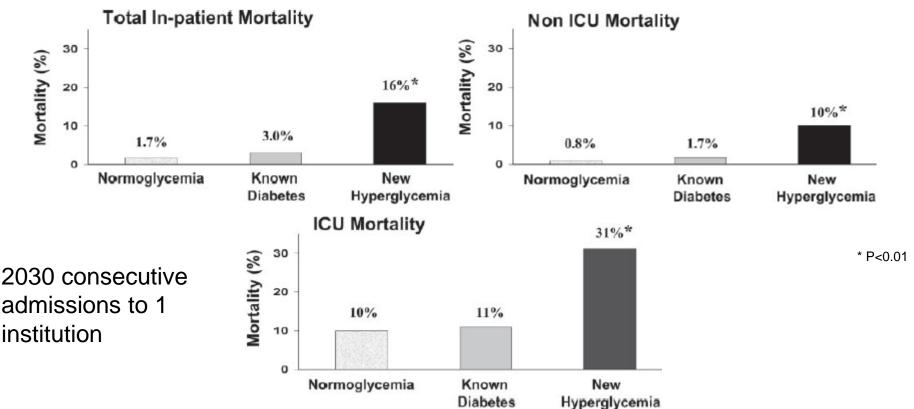
Dangers of High Inpatient Glucose



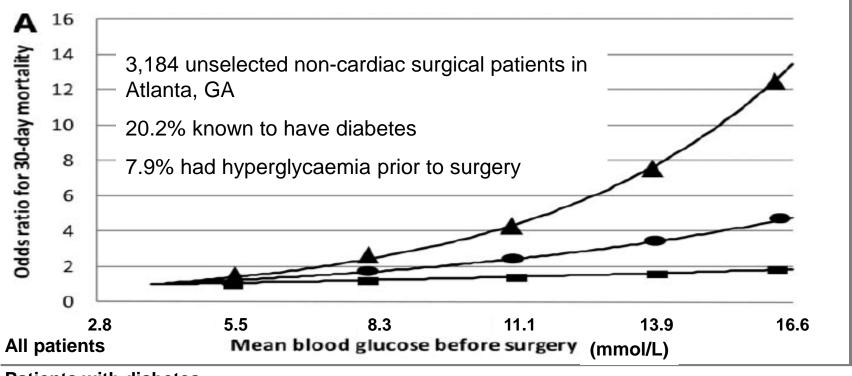


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Dangers of High Inpatient Glucose



The Dangers of Not Identifying?

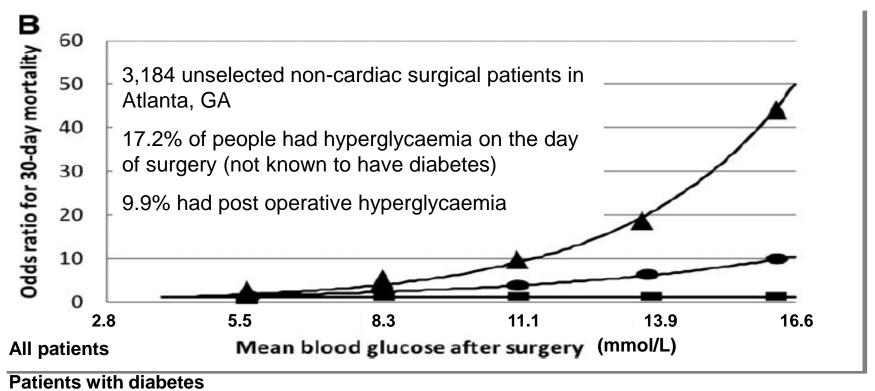


Patients with diabetes

Patients without diabetes



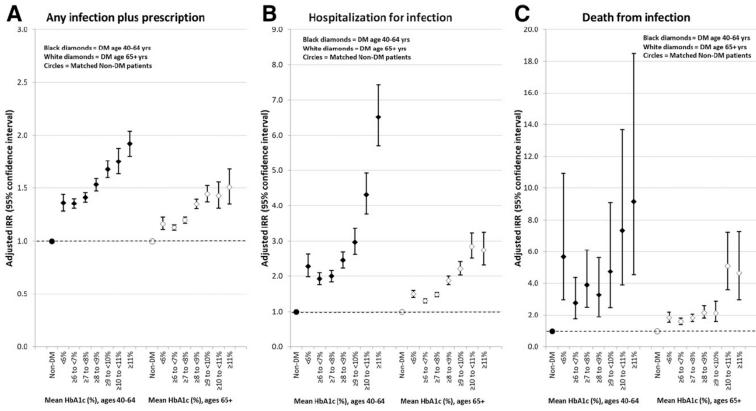
The Dangers of Not Identifying?



Patients without diabetes



Post Surgical Infections





Hypoglycaemia – Mortality

(b)	Hypoglycaemia Control		ntrol	Risk Ratio			Risk Ratio					
Study or Subgroup	Events	Total	Events	Total	Weight (%) M-H, Random, 95		CI		M-H, Rand	/I-H, Random, 95% CI		
2.2.1 Post discharge morta	lity											
Melbin et al. [24]	39	153	222	1055	9.6	1.21 (0.90, 1.63)				 • 		
Subtotal (95% CI)		153		1055	9.6	1.21 (0.90, 1.63)				~		
Total events	39		222									
Heterogeneity: Not applicabl	е											
Test for overall effect: $Z = 1.5$	27 (P = 0.	20)										
2.2.2 In beautal Mantality												
2.2.2 In hospital Mortality												
Turchin et al. [18]	10	338	33	4030		3.61 (1.80, 7.27)						
Borzi et al. [20]	34	385	134	2782		1.83 (1.28, 2.63)					_	
Boucai et al. [23]	51	1717	103	9115		2.83 (1.89, 3.66)						
Nirantharakumar et al. [21]	71	648	298	5726		2.11 (1.65, 2.69)						
Krinsley data [8–10]	173	683	231	2103		2.31 (1.93, 2.75)						
Curkendall et al. [13]	384 14 593	7994 154 510	2139	93 012 5 293 215		2.09 (1.88, 2.32)						
Gomez-Huelgas et al. [11] Subtotal (95% CI)	14 593	166 275	351 378	5 409 983		1.42 (1.40, 1.45) 2.09 (1.64, 2.67)				•		
Total events	15 316		354 316									
Heterogeneity: Tau ² = 0.09;	Chi ² = 106	6.51, df = 6	(P < 0.00	001); /2 = 9	4%							
Test for overall effect: $Z = 5$.	96 (P < 0.	00001)										
2.2.3 ICU Mortality												
Arabi et al. [17]	7	46	29	162	4.1	0.85 (0.40, 1.81)						
Sechterberger et al.[16]	12	57	92	310	6.2	0.71 (0.42, 1.21)				_		
NICE-SUGAR [15]	213	643	147	568	11.4	1,28 (1,07, 1,53)				-		
Subtotal (95% CI)	210	746	141	1040	21.7	0.99 (0.65, 1.51)			-			
Total events	232		268							T		
Heterogeneity: Tau ² = 0.09;		8. df = 2 (F		² = 61%								
Test for overall effect: $Z = 0$.			/,									
		,										
Total (95% CI)		167 174		5 412 078	100.0	1.69 (1.40, 2.03)				•		
Total events	15 587		354 806							1 .		
Heterogeneity: Tau ² = 0.07;		0.1	0.2	0.5	1 2	5	10					
Test for overall effect: $Z = 5.50 (P < 0.00001)$											-	10
Test for subgroup differences: $Chi^2 = 12.83$, $df = 2$ ($P = 0.002$), $I^2 = 84.4\%$								Decreases	mortality	ncreases	mortality	







Hypoglycaemia – Length of Stay

(a)	Hypoglycaemia		Control				Mean Difference	Mean Difference	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight (%)	IV, Random, 95% CI	IV, Random, 95% CI
1.1.1 Ward based care									
Borzoi et al. [20]	12.7	10.9	385	9.6	6.5	2782	11.0	3.10 (1.98, 4.22)	
Boucai et al. [23]	11.2	14	1717	4.6	4.6	9115	11.3	6.60 (5.93, 7.27)	-
Kim et al. [22]	6.9	5.5	452	4.9	3.7	832	11.4	2.00 (1.43, 2.57)	
Ong et al. [19]	10.1	8.2	54	6.8	4.7	234	9.6	3.30 (1.03, 5.57)	
Turchin et al. [18] Subtotal (95% CI)	5.62	5	220 2828	4.4	3.9	3233 16 196	11.3 54.5	1.22 (0.55, 1.89) 3.24 (1.01, 5.47)	-
Heterogeneity: Tau ² = 6.	12; Chi ² :	= 149.5	4, df = 4	(P < 0.0)	00001);	¹² = 97%			
Test for overall effect: Z	= 2.85 (<i>P</i>	P = 0.00	4)						
1.1.3 Hospital location	not spec	cified							
Curkendall et al. [13]	11.7	14	8234	5.1	4.4	95 579	11.5	6.60 (6.30, 6.90)	•
Geremakis et al. [14]	13.34	16.24	2510	8.82	10.96	6442	11.3	4.52 (3.83, 5.21)	
Gomez-Huelgas et al. [1	1] 12.04	13.4	154 504	9.9	11.34	154 504	11.5	2.14 (2.05, 2.23)	•
McEwan et al. [12]	11.91	14	1079	4.8	4.4	1079	11.2	7.11 (6.23, 7.99)	
Subtotal (95% CI)			16 6327			257 604	45.5	5.08 (2.14, 8.02)	
Heterogeneity: Tau ² = 8.	93; Chi ² :	= 903.0	8, df = 3	(P < 0.0)	0001);	² = 100%			
Test for overall effect: Z	= 3.39 (<i>P</i>	P = 0.00	07)						
Total (95% CI)			169 155		:	273 800	100.0	4.08 (2.36, 5.79)	•
Heterogeneity: Tau ² = 6.	65; Chi² :	= 1063.	09, df = 8	B(P < 0)	.00001)	/² = 99%		<u> </u>	<u> </u>
Test for overall effect: Z	= 4.66 (P	? < 0.00	001)					-10) –5 0 5
Test for subgroup differe	nces: Ch	ni² = 0.9	5, df = 1	(P = 0.3)	3), /2 =	0%			Decreases length of stay Increases length of stay

What is a Guideline?

Any guide or indication of a future course of action



Why Are They Needed?

To standardise the care people receive



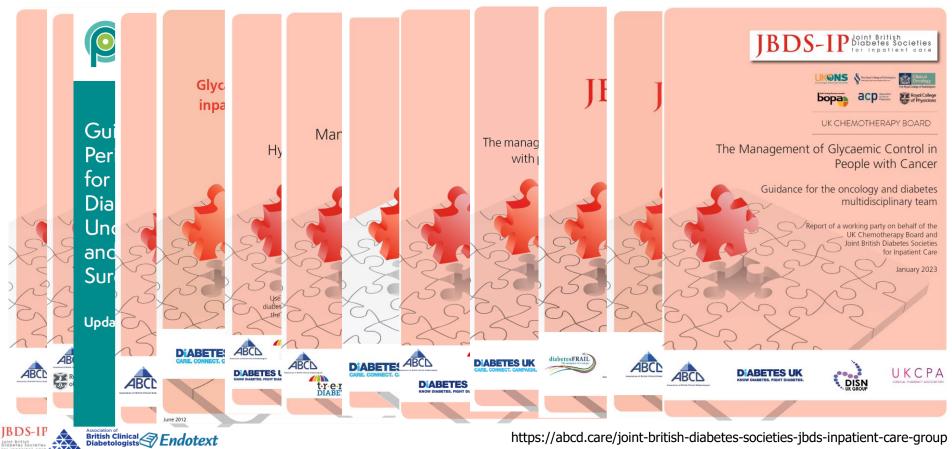
Operational productivity and performance in English NHS acute hospitals:
Unwarranted variations

An independent report for the Depe by Lord Carter of Coles THE MID STAFFORDSHIRE NHS FOUNDATION TRUST PUBLIC INQUIRY

Chaired by Robert Francis QC

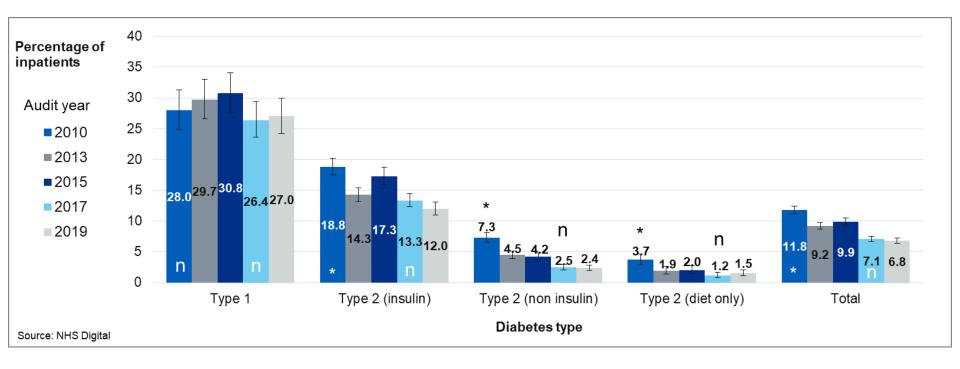
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The Present



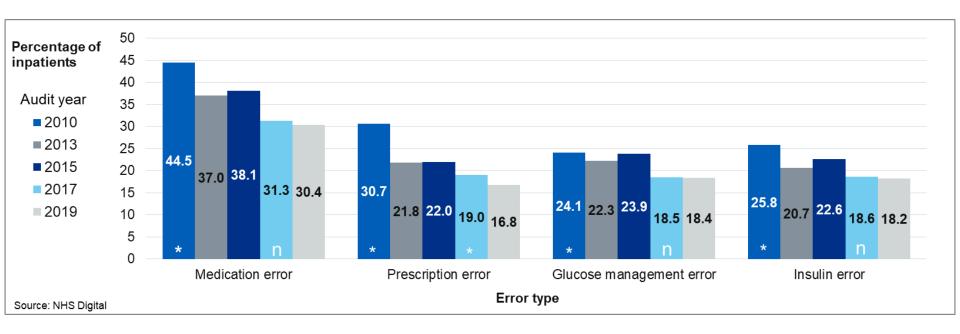


Evidence of Benefit? Severe Hypos





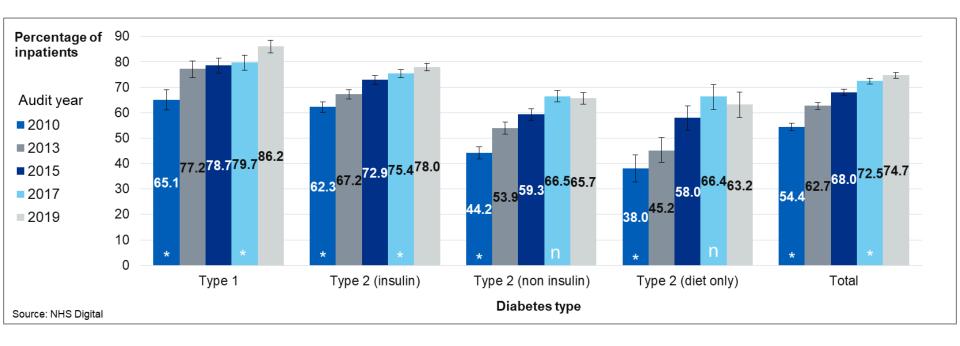
Evidence of Benefit? Medication Errors





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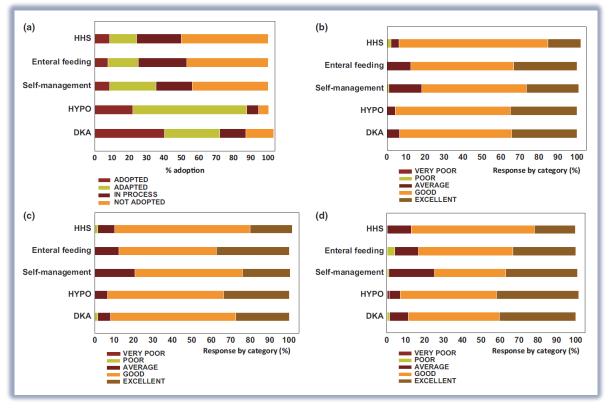
Evidence of Benefit? Seen by the DIST







JBDS Adoption, Value, Quality, Safety

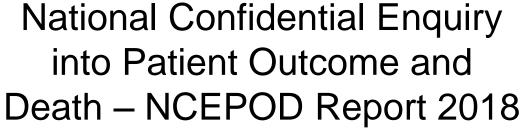


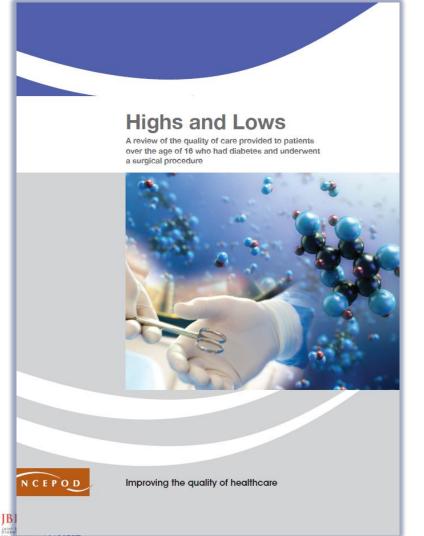
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Partnerships









Factors Leading to Poor Outcomes

- · Failure to identify patients with diabetes or hyperglycaemia
- Lack of institutional guidelines for the management of hyperglycaemia
- Poor knowledge of diabetes amongst staff delivering care
- Complex polypharmacy and insulin prescribing errors

13 Recommendations

Write and implement a national joint 5 Ensure a safe handover of patients with9 Cancellation of elective surgery in patients with diabetes theatre recovery to ward, this should be should be avoided, particularly for known clinical policy for the multidisciplinary manage the case notes and include: reasons. Cancellation rates should be audited locally and with diabetes who require surgery. In a. Medications given in theatre the results acted upon. Appoint a clinical lead for perioperative diabetes care b. Glucose level on leaving the recovery betes ma in hospitals where surgical services are provided. This Develop and implement referral criteria for surgical Develop a pre-operative assessment of person will be responsible for developing policies and utine ca inpatients with diabetes to: and standards for the management of Use a standardised referral process for elective surgery an diabetes. These should be developed I Record and monitor the time at which a patient anaesthetist* and the clinical lead for begins fasting (for surgery or clinical reasons). If a **Pe** 7 to ensure appropriate assessment and optimisation of Ensure that patients with diabetes at diabetes. This should include: operative assessment clinic prior to e Prioritise patients with diabetes on the operating list to a. Satisfactory HbA1c levels within 3 months of referral Ensure that patients with diabetes undergoing surgery avoid prolonged starvation.* Prioritisation of patients A clinical lead for day surgery* should are closely monitored and their glucose levels managed with diabetes on operating lists should be subject to all hospitals providing day surgery se accordingly. Glucose monitoring should be included: along with the clinical lead for period local clinical audit and the results acted upon. a. at sign-in and sign-out stages of the surgical safety management should be responsible checklist (e.g. WHO safety checklist) (Lead Anaesthetist for Pre-operative Assessment, b. in anaesthetic charts patients with diabetes are considered 13 Provide patients with diabetes with education and c. in theatre recovery where appropriate. Policies should be information about their diabetes management at d. in early warning scoring systems ensure patients with diabetes have ed discharge from hospital as part of the discharge System markers and alerts should be used to raise awareness of glucose levels, e.g. tagging of electronic day surgery. planning process. medical records, use of a patient passport or unique (Clinical Lead for Day Surgery, Cli (Diabetes Specialist Nurses, Clinical Lead for stickers in paper based case notes. Perioperative Diabetes Managem Perioperative Diabetes Management) (Clinical Lead for Perioperative Diabetes Directors) Management, Lead Anaesthetist for Pre-Operative Assessment, Clinical Directors,

Medical Directors, Directors of Nursing)

The Future

- At EASD 2023 a new consensus document on the management of hyperglycaemic emergencies will be launched written by ADA/AACE/EASD/JBDS
- New or updated guidance is currently being written on
 - Technology in the hospital
 - Admissions avoidance
 - Diabetes in people with mental health issues
 - Use of intravenous fluids in medical and surgical patients with diabetes
 - The management of diabetes in those having enteral nutrition

The Future

Accreditation is coming to the UK soon





Diabetes Care Accreditation Programme (DCAP)



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Areas of Uncertainty

 There are many areas of inpatient diabetes care where the optimal way of managing dysglycaemia remains unknown

Received: 21 July 2022 Accepted: 17 October 2022
DOI: 10.1111/dme.14980
REVIEW DIABETIC Medicine
<u></u>
Gaps in our knowledge of managing inpatient dysglycaemia
and diabetes in non-critically ill adults: A call for further
research
Ketan K. Dhatariya ^{1,2} ◎ ♥ Guillermo Umpierrez ³

Does the UK have Advantages?

- Possibly
 - It is a small country
 - We have a National Health Service
 - The diabetes community is 'collegiate'

Does India have Challenges?

Of course

- Is there recognition that things can be better
- The element of competition between hospitals
- India is a big place
- Language differences
- Who paying for treatment?
- Is physiology different?

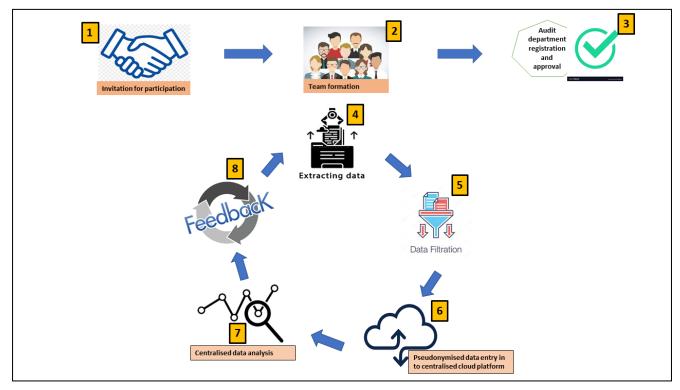
Thoughts for You to Consider

- How UK and India can work together?
- Use JBDS adopt or adapt
- Do your own studies ideally multi centre pre and post introduction of the guidelines
- It's a never ending process

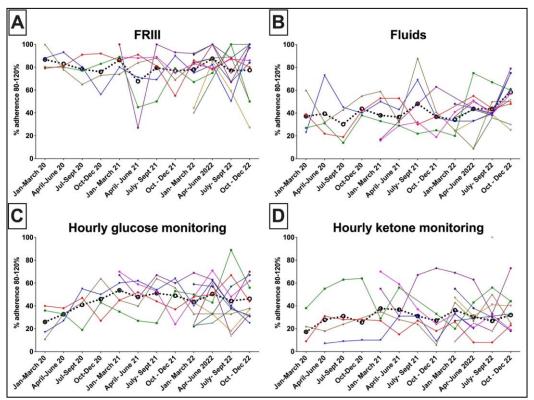


DEKODE Project

Digital Evaluation of Ketosis and Diabetes-related Emergencies

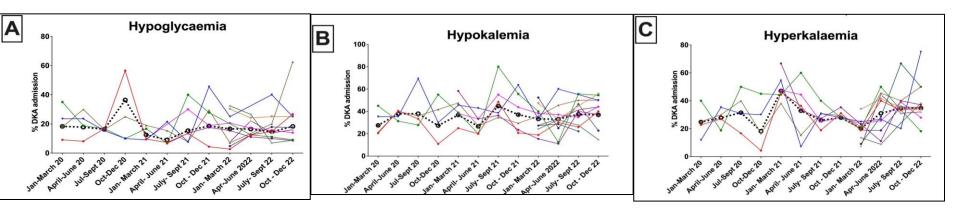


Variation in Care



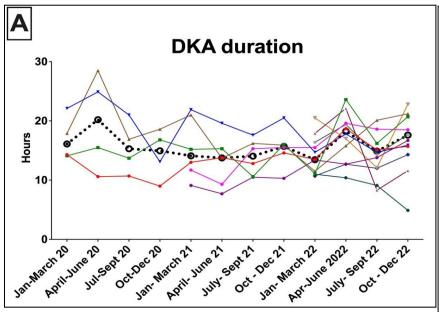


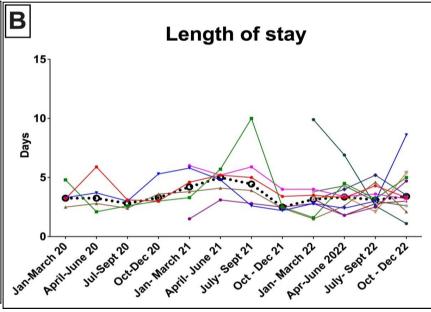






Variation in Care





Take Home Messages

- Standardisation of care has many benefits
- But this involves working together
- Ultimately it is for the benefit of the patient
- I and many others are willing to help



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www.norfolkdiabetes.com

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