

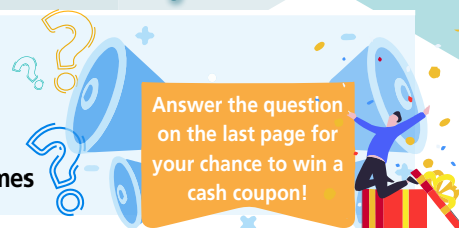
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Aug 2026

Drug Utilisation

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Promoting Safe, Quality and Cost-Effective Use of Proton Pump Inhibitors

By **Mr Jason TONG, Ms Grace YOUNG, Prof William CHUI**

Chief Pharmacist's Office, Hospital Authority Head Office

Proton Pump Inhibitors (PPIs) have ranked among the top 20 therapeutic classes in drug expenditure within the Hospital Authority (HA) in recent years. To promote safe, quality, and cost-effective prescribing, the Chief Pharmacist's Office (CPO) launched an HA-wide Drug Utilisation Review (DUR).

The review identified that although Lansoprazole accounted for only 7.5% of oral PPI consumption, it represented 44.6% of PPI expenditure due to its higher unit cost compared with other PPIs. Lansoprazole is primarily used for patients with swallowing difficulties or those requiring a nasogastric (NG) tube. To enable a safe and quality switch to more cost-effective alternatives, the CPO collaborated closely with the Coordinating Committee in Nursing. Clinical pharmacists and nurses conducted practical testing to assess the safety of alternatives to Lansoprazole (Figure 1). The results demonstrated that Esomeprazole tablets could be safely administered via NG tubes of size 12 French or above (Figure 2).

This multidisciplinary effort, with input from expert panels and relevant stakeholders, led to a unified prescribing approach: Pantoprazole is recommended for patients without an NG tube, while Esomeprazole is for patients requiring NG tube feeding (≥ 12 French).

Supported by targeted education and ongoing monitoring by the Drug Management Committee, the initiative delivered strong results:

- ↓ 34% in Lansoprazole use
- ↓ 18% in overall PPI expenditure
- ↑ \$15.6 million in annual savings

Beyond cost savings, the programme also raised awareness and encouraged deprescribing of unnecessary long-term PPI therapy. This pharmacist-led, nurse-supported, and expert-informed collaboration demonstrates how multidisciplinary teamwork can drive safe, quality, and cost-effective use of medicines, and serves as a scalable model for future DUR initiatives targeting other high-impact drug classes.



Figure 1: Practical Testing to Assess the Safety of Alternatives to Lansoprazole

埃索美拉唑 藥丸溶水方法 ESOMEPAZOLE TABLET DISSOLUTION INSTRUCTIONS



For any queries, please seek advice from your local pharmacy.
Reference: Esomeprazole (Losecan Insert), AstraZeneca Ltd. 2024.

Figure 2: Esomeprazole Tablets Dissolution Instructions

Editorial Comments

This initiative highlights how evidence-based protocols and multidisciplinary alignment can optimise medication usage. Combining data-driven drug utilisation reviews with practical clinical testing allowed for a safe therapeutic switch that controlled costs without compromising patient care. It provides a structured approach applicable to managing other high-expenditure drug classes.

Dr Leo CHAN, Chief Manager (Clinical Effectiveness & Technology Management), HAHO

Right Care, Right Resources: KWC's Journey in Optimising the Use of DPP-4 Inhibitors

By **Mr Simon KWOK¹**, **Ms Angel LI¹**, **Ms Vivien NG¹**, **Dr Gladys KWAN²**, **Dr C B LAW²**

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Background

In 2024, Kowloon West Cluster (KWC) issued recommendations on cost-effective use of Dipeptidylpeptidase-4 (DPP-4) Inhibitors. In 2025, the KWC Working Group on Medications was formed under the KWC Task Force on Operational Efficiency. Comprising hospital management, clinical department leaders, and pharmacists, the Working Group aims to drive cost-effective drug use across various drug classes among different specialties. The Working Group further advanced the optimisation of DPP-4 Inhibitor use, guided by the principles of **right care** and **right resources**.

Right Care: Ensuring Optimal Patient Care

The Working Group focused on rational and cost-effective medication use, ensuring optimal patient care. Given the comparable efficacy within the DPP-4 Inhibitor class¹, Alogliptin was identified as the most cost-effective option and made available in multiple strengths across KWC to enhance accessibility. Vildagliptin, the only twice-daily agent, was phased out to reduce pill burden, simplify regimen and enhance medication adherence.

The Working Group and the Cluster Endocrine Team led cluster-wide initiatives, including seminars and prescribing practice reviews. Targeted measures were introduced, such as screening and tagging patients with preserved renal function to facilitate therapeutic switching from Linagliptin to Alogliptin.

Right Resources and Sustaining Momentum

These concerted efforts freed up \$1.8 million in 2025/26, enabling reallocation to other priority therapeutic areas and optimising healthcare resources. Moving forward in 2026/27, KWC will continue reviewing its drug listing to enhance operational efficiency and strengthen resource stewardship.

Special acknowledgment: KWC M&G Departments, KWC FM&PHC Department, KWC Pharmacy Departments

References: ¹ Craddy P, Palin HJ, Johnson KI. Comparative effectiveness of dipeptidylpeptidase-4 inhibitors in type 2 diabetes: a systematic review and mixed treatment comparison. *Diabetes Ther.* 2014 Jun;5(1):1-41. doi: 10.1007/s13300-014-0061-3. Epub 2014 Mar 25. PMID: 24664619; PMCID: PMC4065303.



Figure 1: Cluster-based Staff Engagement Forum held on 23 July 2025, Organised by the KWC Task Force on Operational Efficiency

Editorial Comments

The findings demonstrate evidence-based cost-benefit formulary optimisation. With comparable DPP-4 efficacy, selecting Alogliptin as the lowest-cost equivalent improves value. Phasing out vildagliptin reduces regimen complexity, which may further lower non-adherence-related inefficiencies. Renal-function screening to support safe switching strengthens the risk-cost balance. The reported \$1.8 million savings indicates favourable net economic impact for reallocation to higher-priority therapies.

Dr Harris LAM, Manager (Nursing)/ Chief Nursing Officer, HAHO

Precision Over Tradition: Optimising IVIG Dosing for Better Clinical and Economic Outcomes

By **Ms Carol FAN¹**, **Ms Angela LIU¹**, **Mr Jason CHEN²**, **Mr Steve TAM²**, **Dr Emmy LAU³**

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Intravenous immunoglobulin (IVIG) is an expensive therapy with a pharmacokinetic profile characterised by a low volume of distribution, primarily confined to the intravascular space and minimally distributed into adipose tissue. Traditional dosing based on Actual Body Weight (ABW), especially in overweight and obese patients, can result in unnecessary overexposure, increased adverse effects, and avoidable healthcare expenses.

With obesity affecting 32.6% of Hong Kong Chinese aged 15–84 (BMI ≥ 25 kg/m²), implementing a precise dosing strategy is crucial. In response, the Hong Kong Island Cluster (East) [HKIC(E)] launched a pioneering quality improvement initiative in April 2025 to promote IVIG dosing based on Ideal Body Weight (IBW) or Adjusted Body Weight (AdjBW) when either is lower than ABW. This initiative integrated targeted educational outreach to key prescribers, with practical tools such as dosing charts and calculators. Continuous prescription review and feedback further reinforced adherence.

The interim evaluation, comparing April to September 2025 with the same period in 2024, reveals a remarkable 7.4% reduction in IVIG expenditure, from HK\$ 8.35 million to HK\$ 7.73 million (Figure 1). Further analysis of 51 patient episodes (August to September 2025) identified 11 cases in which appropriate IBW or AdjBW dosing was applied, resulting in savings of HK\$ 0.32 million and a projected annual savings of approximately HK\$ 1.92 million.



IVIG EXPENDITURE REDUCTION
(April–September 2025 vs 2024)
HK\$8.35M → HK\$7.73M
7.4% Reduction

Figure 1: IVIG Expenditure Reduction

These early results show that aligning IVIG dosing with pharmacokinetic principles can reduce costs without sacrificing effectiveness and improve safety by lowering risks like fluid overload and thrombosis.

We are also creating a web-based dosing calculator within the Electronic Patient Record (ePR) system to help prescribers quickly determine the appropriate dose by entering the patient's weight and height (Figure 2). This standardises prescribing, prevents overdosing, and promotes cost-effective, patient-centred care.

The success of this initiative highlights the potential of precision dosing to transform healthcare and encourages broader adoption. Ongoing monitoring, education, and system integration are vital to maintaining and expanding these gains.

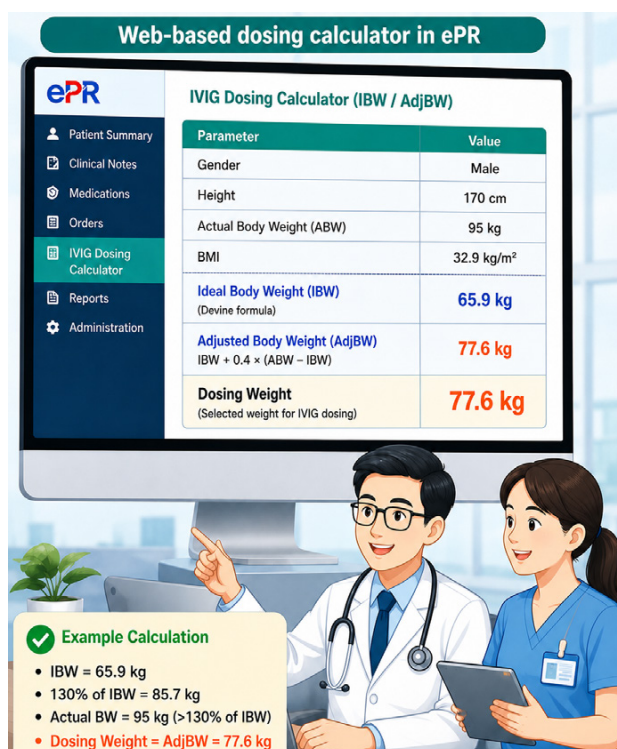


Figure 2: Example of Dosing Calculator

Editorial Comments

This HKIC(E)'s initiative delivers both fiscal benefit and patient safety through evidence-based precision dosing. By using Ideal/Adjusted Body Weight instead of Actual Body Weight in IVIG dose calculation, it managed to save 7.8% expenditure in 6 months year-over-year, proving that precision dosing is clinically effective while economically sound. By embedding the dosing calculator into clinical system further assists clinician to make smarter prescription, setting a good model for other healthcare service transformation.

Dr Osburga CHAN, Service Director (Quality & Safety), KCC



Trivia

Please scan the QR code to answer the question of the Trivia. If you answer the following question correctly by 20 Sep 2026, we will put your name into a lucky draw. Then we will present a gift coupon to each of the 3 winners that we draw.



According to the practical test conducted, which proton pump inhibitor is recommended for administration via nasogastric tubes of size ≥ 12 French?

- A. Lansoprazole
- B. Esomeprazole
- C. Pantoprazole

Here is the answer of Issue 59:

Question: What do the national accreditation standards for Chest Pain Centres emphasise?
Answer: B) Improving patient outcomes through standardised workflows, multidisciplinary collaboration, and evidence-based protocols

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