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New Zealand Government

New reporting form for adverse events following immunisation with COVID-19 vaccines

Key messages

- An adverse event reporting form for COVID-19 vaccines is now available.
- Healthcare professionals are encouraged to use this new reporting form.

A new reporting form for adverse events following immunisation (AEFIs) with COVID-19 vaccines is now available. The form is published on the Centre for Adverse Reactions Monitoring (CARM) website and is designed to make reporting of AEFIs easier.

Please use this new form to report all suspected AEFIs for COVID-19 vaccines. You don't have to be certain that the vaccine caused the event.

Although the form is downloadable and can be sent to CARM, we encourage reporters to use the online version. Direct online reporting will help provide a close to real-time safety profile of the COVID-19 vaccines.

The new reporting form includes:

- easy selection of COVID-19 vaccines
- tick boxes for specific adverse events following immunisation (eg, anaphylaxis)
- reporter assessment of how serious the reaction is.

If completed online, there is the ability to attach additional documents (eg, blood test results or images). A PDF of the submitted report will also be provided for your records.

Including detailed information in the report will help CARM and Medsafe to investigate the adverse event more quickly.[1]

Medsafe is actively encouraging healthcare professionals and members of the public to report suspected AEFIs for COVID-19 vaccines to:

- add to the information we already know about the safety profile of each vaccine
- act as an early warning system for the identification of previous unrecognised or rare side effects.

Medsafe and regulators across the globe are sharing emerging anonymised safety data.

See the data sheets and consumer medicine information for the expected reactions for approved COVID-19 vaccines. These documents are published on the Medsafe website.

Reference

1. Medsafe. 2019. The fantastic four of adverse drug reaction reporting. *Prescriber Update* 40(2): 34–5. URL: medsafe.govt.nz/profs/PUArticles/June2019/The-fantastic-four-of-adverse-drug-reaction-reporting.htm (accessed 26 January 2021).

Spotlight on gabapentin and pregabalin for neuropathic pain

Key messages

- Gabapentin and pregabalin are indicated for the treatment of neuropathic pain only. Use in other types of pain is unapproved.
- Cases of abuse and dependence have been reported with gabapentin and pregabalin. Evaluate patients for a history of substance abuse and observe for signs of misuse or abuse.
- Concurrent treatment with CNS depressants (eg, opioids) and gabapentin or pregabalin should be avoided. Observe patients carefully for CNS depression if concurrent use cannot be avoided.

The Spotlight series continues with this article on gabapentin and pregabalin, collectively known as gabapentinoids. They are anticonvulsant medicines but also have analgesic and anxiolytic actions.[1] This article focuses on the use of gabapentinoids for neuropathic pain.

Please refer to the medicine data sheets for full prescribing information (**search for a data sheet**). Note that a careful titration of these medicines is important for patient safety.

Neuropathic pain

Gabapentin and pregabalin are indicated for the treatment of neuropathic pain. Use of gabapentinoids for other types of pain (eg, chronic or musculoskeletal pain) is unapproved and is not supported by clinical evidence.

Neuropathic pain is typically described as shooting, stabbing, burning, tingling, like an electric shock, tightness, numbness, and prickling.[2] Patients may also describe allodynia (pain due to a stimulus that does not normally provoke pain, such as soft touch) or hyperalgesia (an exaggerated or increased response to a stimulus that is normally painful).[2]

Guidelines for pharmacological treatment of neuropathic pain generally recommend a step-wise approach, starting with a tricyclic antidepressant, serotonin-noradrenaline reuptake inhibitor, or a gabapentinoid.[2–4]

Adverse events

Dizziness and somnolence

Advise patients not to drive or operate complex machinery until it is known whether these medicines affect their ability to perform these activities.[5,6] In clinical trials for treatment of neuropathic pain, dizziness and somnolence were the most commonly reported adverse events for pregabalin and gabapentin compared to placebo.[5,6] Dizziness and somnolence were also the most commonly reported reasons for treatment discontinuation for both medicines.[5,6]

Abuse and dependence

Internationally, cases of abuse and dependence have been reported with gabapentinoids.[5,6] Evaluate patients for a history of substance abuse and observe for signs of misuse or abuse (eg, development of tolerance, increasing doses, drug-seeking behaviour).[5,6]

Concurrent treatment with opioids and gabapentinoids increases the risk of abuse and dependence.[7–9]

Concurrent use of gabapentinoids with CNS depressants

Concurrent treatment with CNS depressants (eg, opioids) and gabapentin or pregabalin should be avoided.[5,6] In the event that these medicines have to be used together, the patient must be closely observed for signs of CNS depression, such as somnolence, sedation and respiratory depression, and the doses adjusted as needed.[5]

Suicidal behaviour and ideation

Antiepileptics, including gabapentin and pregabalin, can increase the risk of suicidal thoughts or behaviour when used for any indication.[5,6] Monitor patients for emergence or worsening of depression, suicidal thoughts or behaviour, and/or any unusual changes in mood or behaviour.[5,6]

New Zealand adverse reaction reports

Up to 30 June 2020, the Centre for Adverse Reactions Monitoring (CARM) had received 50 adverse reaction reports for pregabalin and 248 reports for gabapentin (for any indication).

Of the 50 reports where pregabalin was coded as the suspect medicine, withdrawal syndrome was reported in 7 cases (CARM IDs: 036058, 051356, 062548, 064084, 093296, 135012, 135138).

Of the 248 reports where gabapentin was the coded as the suspect medicine, withdrawal syndrome was reported in 7 cases (CARM IDs: 094871, 096116, 096253, 119601, 131036, 133627, 135012).

References

1. Mathieson S, Lin C-W C, Underwood M, et al. 2020. Pregabalin and gabapentin for pain. *BMJ* 369: m1315. DOI: 10.1136/bmj.m1315 (accessed 15 February 2021).
2. National Institute for Health Care Excellence (NICE). 2013. *Neuropathic pain in adults: Pharmacological management in non-specialist settings* URL: www.nice.org.uk/guidance/cg173 (accessed 7 December 2020).
3. BPAC^{NZ}. 2018. *Prescribing gabapentin and pregabalin: Upcoming subsidy changes*. URL: bpac.org.nz/2018/gabapentinoids.aspx (accessed 15 February 2021).
4. Bates D, Schultheis BC, Hanes MC, et al. 2019. A comprehensive algorithm for management of neuropathic pain. *Pain Medicine* 20(Suppl 1): S2–S12. DOI:10.1093/pm/pnz075 (accessed 4 February 2021).
5. Pfizer New Zealand Ltd. 2020. *Neurontin New Zealand Data Sheet* May 2020. URL: medsafe.govt.nz/profs/Datasheet/n/Neurontincaptab.pdf (accessed 7 December 2020).
6. Pfizer New Zealand Ltd. 2020. *Pregabalin Pfizer New Zealand Data Sheet* January 2020. URL: medsafe.govt.nz/profs/datasheet/l/Lyricacaps.pdf (accessed 7 December 2020).
7. Peckham A, Ananickal M and Sclar D. 2018. Gabapentin use, abuse, and the US opioid epidemic: the case for reclassification as a controlled substance and the need for pharmacovigilance. *Risk Management and Healthcare Policy* 11: 109–16. DOI: 10.2147/rmhp.s168504 (accessed 7 December 2020).
8. Baird C, Fox P and Colvin L. 2014. Gabapentinoid abuse in order to potentiate the effect of methadone: a survey among substance misusers. *European Addiction Research* 20(3): 115–8. DOI: 10.1159/000355268 (accessed 7 December 2020).
9. Reeves R and Ladner M. 2014. Potentiation of the effect of buprenorphine/naloxone with gabapentin or quetiapine. *American Journal of Psychiatry* 171(6): 691. DOI: 10.1176/appi.ajp.2014.13111526 (accessed 7 December 2020).

Vildagliptin and ACE inhibitors – increased risk of angioedema

Key messages

- Combined use of vildagliptin and an ACE inhibitor increases the risk of angioedema, compared to use of either medicine alone. Consider this possible drug-drug interaction if a patient taking these medicines presents with angioedema.
- Patients taking both vildagliptin and an ACE inhibitor may require additional monitoring for angioedema.
- Ask the patient to report any angioedema symptoms to their prescriber.

Background

Angioedema is the sudden localised swelling of the skin or mucous membranes caused by a transient increase in endothelial permeability and extravasation of plasma into the interstitial tissues.[1]

Vildagliptin is a recently funded dipeptidyl peptidase-4 (DPP-4) inhibitor indicated for the improvement of glycaemic control in type 2 diabetes.[2] Angiotensin-converting enzyme inhibitors (ACE inhibitors) are indicated for treatment of diabetic nephropathy, amongst other uses,[3] and therefore these two medicines are often used together.

ACE inhibitor-induced angioedema

Angioedema is reported to occur in approximately 0.2 to 2.5 percent of patients taking an ACE inhibitor.[1] It may occur at any time during treatment.[4]

ACE inhibitor-induced angioedema predominantly affects the head and neck area, particularly the lips, tongue, face and upper airway, and thus may be life-threatening.[4] Less commonly, the angioedema may present as acute abdominal pain associated with diarrhoea or other gastrointestinal symptoms, due to visceral involvement.[4] It is not associated with itching or urticaria.[4]

Increased risk of angioedema with vildagliptin and ACE inhibitors

Angioedema is rarely seen in patients on vildagliptin monotherapy, but the risk is increased in patients who are also taking an ACE inhibitor.[2,5] While the absolute risk is small,[5] it is likely that many patients prescribed vildagliptin will also be taking an ACE inhibitor. Consider this possible drug-drug interaction if a patient taking these medicines presents with angioedema.[5]

Check the medicine data sheets for more information. Patients may require additional monitoring for angioedema. Ask the patient to report back any symptoms.

Suggested mechanism

Substance P and bradykinin are vasodilators involved in the pathogenesis of angioedema. ACE and DPP-4 are involved in the degradation of substance P, and ACE is one of the enzymes that degrade bradykinin.[5,6]

Compared with inhibition of ACE or DPP-4 alone, inhibition of both enzymes by the combined use of an ACE inhibitor and vildagliptin increases the risk of accumulation of substance P and bradykinin, resulting in angioedema.[5,6]

New Zealand case reports

Since 2018, the Centre for Adverse Reactions Monitoring (CARM) has received four reports describing angioedema after starting vildagliptin (CARM IDs: 131257, 136882, 131241, 133491). In two cases, the patients were already taking an ACE inhibitor when vildagliptin treatment was initiated.

References

1. Rasmussen ER, Mey K and Bygum A. 2014. Angiotensin-converting enzyme inhibitor-induced angioedema – A dangerous new epidemic. *Acta Derm Venereol* 94(3): 260–4. DOI: 10.2340/00015555-1760 (accessed 3 February 2021).
2. Novartis New Zealand Limited. 2020. *Galvus New Zealand Data Sheet* 1 July 2020. URL: medsafe.govt.nz/profs/Datasheet/g/galvustab.pdf (accessed 9 December 2020).
3. New Zealand Formulary. 2020. *New Zealand Formulary v102: Angiotensin-converting enzyme inhibitors* 1 December 2020. URL: nzf.org.nz/nzf_1242 (accessed 9 December 2020).
4. Guyer A and Banerji A. 2020. ACE inhibitor-induced angioedema. In: *UpToDate* 1 June 2020. URL: uptodate.com/contents/ace-inhibitor-induced-angioedema (accessed 9 December 2020).
5. Brown NJ, Byiers S, Carr D, et al. 2009. Dipeptidyl peptidase-IV inhibitor use associated with increased risk of ACE inhibitor-associated angioedema. *Hypertension* 54(3): 516–23. DOI: 10.1161/HYPERTENSIONAHA.109.134197 (accessed 9 December 2020).
6. Scott SI, Andersen MF, Aagaard L, et al. 2018. Dipeptidyl peptidase-4 inhibitor induced angioedema – An overlooked adverse drug reaction? *Curr Diabetes Rev* 14(4): 327–33. DOI: 10.2174/1573399813666170214113856 (accessed 3 February 2021).

MARC's remarks: December 2020 meeting

The Medicines Adverse Reactions Committee (MARC) convened via videoconference on 3 December 2020.

The Committee reviewed three potential safety concerns with **gabapentin** and **pregabalin**: misuse, abuse and dependence; opioid-related death and respiratory depression; and use in elderly patients. The Committee recommended more prescriber education is required to reduce the inappropriate prescribing of these medicines for chronic non-neuropathic pain (such as lower back pain), and to highlight the potential for misuse (see the Spotlight article on page 3). The Committee also recommended that Medsafe write to the sponsors of these medicines to strengthen the data sheet wording on some of these potential safety concerns.

The Committee reviewed the available data on **opioid** use to ascertain if there is a problem of abuse, misuse and dependence in New Zealand or a recent increase in this problem. The Committee noted from the global data that New Zealand is doing comparatively well, but more work is required to reduce the issue of abuse, misuse and dependence. The Committee recommended potential regulatory actions and education to raise prescriber awareness of these issues.

The Committee discussed the use of **HER2 and CD receptor-targeted monoclonal antibodies** and the risk of interstitial lung disease. The Committee noted that a link was difficult to establish because of potential confounding from the underlying disease and concomitant medicines. Currently there is limited information available and only a small number of cases reported in New Zealand. The Committee recommended that sponsors review the risk of interstitial lung disease as part of their routine benefit-risk evaluation reports for pertuzumab, daratumumab and obinutuzumab.

The Committee considered the available evidence of congenital malformation when **tricyclic antidepressants** (TCAs) are taken in the first trimester of pregnancy. The Committee concluded that the current evidence is inconclusive and that the data sheets for TCAs should reflect this uncertainty. The Committee also pointed out that it is essential for prescribers to discuss the benefits and the risk of harm with women who take TCAs to enable them to make informed decisions about use in pregnancy.

See the Medsafe website for the **MARC meeting minutes** and the **reports presented to the MARC**.

Quarterly summary of recent safety communications

The table below is a summary of recent safety communications to health care professionals and consumers, **published on the Medsafe website**.

Date	Communication	Topic
14/02/2021	Dear Healthcare Professional Letter	Supply of Comirnaty COVID-19 Vaccine in New Zealand (PDF, 9 pages, 2.07 MB)
5/02/2021	Dear Healthcare Professional Letter	Supply of Canadian-labelled Coversly 2 mg and 4 mg perindopril erbumine tablets in New Zealand (PDF, 3 pages, 146 KB)
28/01/2021	Dear Healthcare Professional Letter	Tenecteplase supply shortage (PDF, 2 pages, 316 KB)
13/01/2021	Dear Healthcare Professional Letter	Clopine Central Database: Updated blood monitoring threshold levels and its impact on colour coding has been delayed (PDF, 1 page, 94 KB)
14/12/2020	Dear Healthcare Professional Letter	Temporary Medicine Shortage of Metalyse (tenecteplase) (PDF, 2 pages, 128 KB)
14/12/2020	Dear Healthcare Professional Letter	Clopine Central Database: Updated blood monitoring threshold levels and its impact on colour coding has been delayed (PDF, 1 page, 108 KB)
10/12/2020	Monitoring	UPDATE: Potential interaction between fluoxetine and levothyroxine
10/12/2020	Monitoring	Antiseptic Soothing Cream: review of the benefits and risks requested under section 36 of the Medicines Act 1981
16/11/2020	Dear Healthcare Professional Letter	Letter to Pharmacist – Notification of shortage of Minirin (desmopressin acetate) nasal drops
16/11/2020	Dear Healthcare Professional Letter	Letter to Prescriber – Notification of shortage of Minirin (desmopressin acetate) nasal drops (PDF, 2 pages, 268 KB)
11/11/2020	Dear Healthcare Professional Letter	Supply of Australian-labelled Lyrica (pregabalin) 150 mg capsules in New Zealand (PDF, 2 pages, 149 KB)
9/11/2020	Dear Healthcare Professional Letter	Tecentriq® (atezolizumab), Identified Risk of Severe Cutaneous Adverse Reactions (SCARs) (PDF, 2 pages, 215 KB) and Correction note (PDF, 1 page, 147 KB)
5/11/2020	Dear Healthcare Professional Letter	Supply of Engerix-B paediatric vaccine 10 mcg/0.5ml (Hepatitis B Vaccine) – Australian pack (PDF, 3 pages, 244 KB)

Green breast milk – related to propofol?

Propofol is an anaesthetic agent used for induction and maintenance of general anaesthesia in adults and children.[1] It has been reported that propofol may discolour urine.[1] Here we note a report of propofol and breast milk discolouration.

In August 2020, the Centre for Adverse Reactions Monitoring (CARM) received a report of a 29-year-old patient who had received propofol as an anaesthetic agent and whose expressed breast milk appeared green post-surgery (CARM ID 138010).

Internationally, there are other case reports of green breast milk following administration of propofol.[2–4]

The reason for the discolouration is unclear. Healthcare professionals are reminded to check the New Zealand data sheet for information on breastfeeding following administration of propofol. (**Search for a data sheet.**)

References

1. New Zealand Formulary. 2020. *New Zealand Formulary v103: Propofol* 1 January 2021. URL: nzf.org.nz/nzf_6905 (accessed 19 January 2021).
2. Birkholz T, Eckardt G, Renner S, et al. 2009. Green breast milk after propofol administration. *Anesthesiology* 111: 1168–9. URL: pubs.asahq.org/anesthesiology/article/111/5/1168/9709/Green-Breast-Milk-after-Propofol-Administration (accessed 21 January 2021).
3. Rainone A, Delucilla L, Elofer S, et al. 2018. Propofol-induced green breast milk: A case report. *Canadian Journal of Hospital Pharmacy* 71(6): 389–91. URL: ncbi.nlm.nih.gov/pmc/articles/PMC6306180/ (accessed 21 January 2021).
4. Bulut O and Ovali F. 2020. Green breast milk: A rare side effect of propofol. *Journal of Paediatrics and Child Health* 8 September 2020. URL: doi.org/10.1111/jpc.15139 (accessed 21 January 2021).

Gathering knowledge from adverse reaction reports: March 2021

Adverse reaction reporting is an important component of medicine safety monitoring. Case reports can highlight significant safety issues concerning therapeutic products and their use.

The table below presents a selection of recent informative cases from the Centre for Adverse Reactions Monitoring (CARM) database.

Case details[a,b]	Reaction description and data sheet information[b,c]
CARM ID: 138173 **Age**: 81 **Gender**: Female **Medicine(s)**: Sodium valproate **Reaction(s)**: Encephalopathy, hyperammonaemia	The patient presented to hospital with confusion, difficulty conversing, lethargy, nausea and loss of balance. Laboratory tests showed elevated ammonia levels. The patient was diagnosed with hyperammonaemic encephalopathy, secondary to sodium valproate.
	The **Epilim data sheet** states that hyperammonaemia can occur in patients during treatment with sodium valproate/valproic acid. In patients who develop unexplained lethargy and vomiting or changes in mental status, further investigations and hyperammonaemic encephalopathy should be considered. In these patients, EEG and ammonia level should be checked and, if ammonia is increased, valproate therapy should be discontinued.

Case details[a,b]	Reaction description and data sheet information[b,c]
CARM ID: 138298 **Age**: 29 **Gender**: Female **Medicine(s)**: Sertraline **Reaction(s)**: Libido decreased, anorgasmia	The patient experienced decreased libido and anorgasmia during treatment with sertraline. The treatment was discontinued but the symptoms have persisted.
	The **Arrow Sertraline data sheet** states that selective serotonin reuptake inhibitors (SSRIs)/serotonin norepinephrine reuptake inhibitors (SNRIs) may cause symptoms of sexual dysfunction. There have been reports of long-lasting sexual dysfunction where the symptoms have continued despite discontinuation of SSRIs/SNRI. See also the Consumer Information Leaflet, **Medicines for depression or other mental disorders and difficulties with sex (sexual dysfunction)**.
CARM ID: 138341 **Age**: 80 **Gender**: Female **Medicine(s)**: Codeine **Reaction(s):** Anaphylactic reaction	Within 15 minutes of codeine administration, the patient experienced itchiness in her hands, which then progressed to lip swelling and facial oedema, flushed skin, a drop in blood pressure and reduced responsiveness. Treatment for anaphylaxis was administered and the reaction eased.
	Allergic reactions are listed in the **Codeine PSM data sheet**, including rash, urticaria, pruritis, difficulty breathing, increased sweating, redness of flushed face and angioedema.
CARM ID: 138590 **Age**: 40 **Gender**: Female **Medicine(s)**: Phenylephrine, amitriptyline **Reaction(s)**: Dry mouth, dry skin, palpitations, tachycardia	The patient took her prescribed amitriptyline dose, and soon after took a Sudafed PE (phenylephrine) tablet for sinus congestion. The patient presented to hospital with palpitations, dry mouth, behavioural changes and increased blood pressure. A drug interaction between amitriptyline and epinephrine was suspected.
	The **Arrow-Amitriptyline data sheet** states that amitriptyline may potentiate the cardiovascular effects of adrenaline, ephedrine, isoprenaline, noradrenaline, phenylephrine, and phenylpropanolamine (eg, as contained in local and general anaesthetics and nasal decongestants).
CARM ID: 138832 **Age**: 49 **Gender**: Male **Medicine(s)**: Vildagliptin **Reaction(s)**: Pancreatitis	A patient taking vildagliptin was admitted to hospital with pancreatitis.
	The **Galvus data sheet** states that acute pancreatitis has been reported in patients treated with vildagliptin (frequency unknown). Inform patients of the characteristic symptom of acute pancreatitis: persistent, severe abdominal pain. Discontinue treatment if pancreatitis is suspected.
CARM ID: 138877 **Age**: 31 **Gender**: Female **Medicine(s)**: Varenicline **Reaction(s)**: Seizure	A patient with a history of seizures felt unwell soon after taking the first dose of varenicline. She had three seizures the next day.
	The **Varenicline Pfizer data sheet** states that there have been reports of seizures in patients with or without a history of seizures, treated with varenicline. Varenicline should be used cautiously in patients with a history of seizures or other conditions that potentially lower the seizure threshold.

Case details[a,b]	Reaction description and data sheet information[b,c]
CARM ID: 139060 **Age**: 15 **Gender**: Male	The patient developed proteinuria soon after starting treatment with isotretinoin. Although isotretinoin was immediately discontinued, the proteinuria worsened before resolving four weeks after stopping treatment.
Medicine(s): Isotretinoin **Reaction(s)**: Proteinuria	Proteinuria is listed as a rare adverse reaction in the Oratane data sheet.

Notes:

a. Only the medicines suspected to have caused the reaction are listed in the table.

b. The reactions listed in the 'Case details' column are coded according to the Medical Dictionary for Regulatory Activities (MedDRA), an internationally used set of standardised terms relating to medical conditions, medicines and medical devices. The reactions listed in the 'Reaction description' column are based on what was reported to CARM, and do not always match the MedDRA term.

c. If the suspect medicine's brand name is not described in the report to CARM, only the data sheet for the funded medicine is included in the table.

Information about suspected adverse reactions reported to CARM is available on the Medsafe website using the Suspected Medicines Adverse Reaction Search (SMARS).

By selecting the ingredient of a medicine, you can find out:

- the number of reports and suspected adverse reactions for that ingredient. The suspected reactions are grouped by body system or organs (Summary report)
- single case reports, listing the medicines involved that contain the ingredient and the suspected adverse reactions (Detail report).

Administering goserelin implants

Key messages

- Goserelin implants are administered subcutaneously into the abdomen to treat certain hormone-related conditions relating to testosterone or oestrogen levels.
- Medsafe has received reports of administration problems associated with goserelin implants.
- Before administration, make sure you understand all the instructions in the package insert.

Goserelin acetate is a synthetic analogue of naturally occurring luteinising-hormone releasing hormone. Goserelin inhibits pituitary luteinising-hormone secretion, leading to a fall in serum testosterone concentrations in men and serum oestradiol concentrations in women.

There are currently two approved, funded brands of goserelin implants: Zoladex and Goserelin (Teva).

Administration complaints

Medsafe has received reports of administration problems associated with goserelin implants. The most common issues are:

- difficulty firing the implant
- the implant not remaining at the injection site.

Medsafe's investigation of these administration issues has identified the following potential causes:

- the shield and syringe were damaged before administration
- insufficient force used to push the plunger
- the plunger rod not being fully depressed.

Tips for administration

Before administration, make sure you understand all the instructions contained in the package insert. In particular:

- do not use any product that has been opened or damaged
- make sure the barrel or protective sleeve of the syringe touches the patient's skin during implantation
- use sufficient force so that the plunger is fully depressed.

For further information on goserelin implants, refer to the Zoladex[1] and Goserelin (Teva)[2] data sheets.

A Zoladex administration video is also available.

References

1. AstraZeneca Limited. 2020. *Zoladex New Zealand Data Sheet* 8 May 2020. URL: medsafe.govt.nz/profs/datasheet/z/Zoladex10implant.pdf (accessed 13 January 2021).
2. Teva Pharma (New Zealand) Limited. 2018. *Goserelin (Teva) New Zealand Data Sheet* 19 July 2018. URL: medsafe.govt.nz/profs/datasheet/G/Goserelin108implant.pdf (accessed 13 January 2021).

Recent approvals: new active ingredients or new indications

For the period 16 October 2020 to 15 January 2021.

Recent approvals of medicines with new active ingredients

Trade name (active ingredient)	Dose form and strength(s)	Therapeutic area
Constella (linaclotide)	Capsule 72 mcg 145 mcg 290 mcg	Chronic idiopathic constipation Irritable bowel syndrome
Parizem (paricalcitol)	Liquid filled capsule 1 mcg 2 mcg	Secondary hyperparathyroidism
Rinvoq (upadacitinib hemihydrate)	Modified release tablet 15 mg	Rheumatoid arthritis

Approved medicines with new indications

Trade Name (active ingredient)	Dose form and strength(s)	New therapeutic area(s)
Dexmethsone (dexamethasone)	Tablet 0.5 mg 4 mg	Coronavirus (COVID-19) infection

See the Medsafe website for:

- **more information about these medicines**
- **data sheets of currently marketed medicines**.

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