

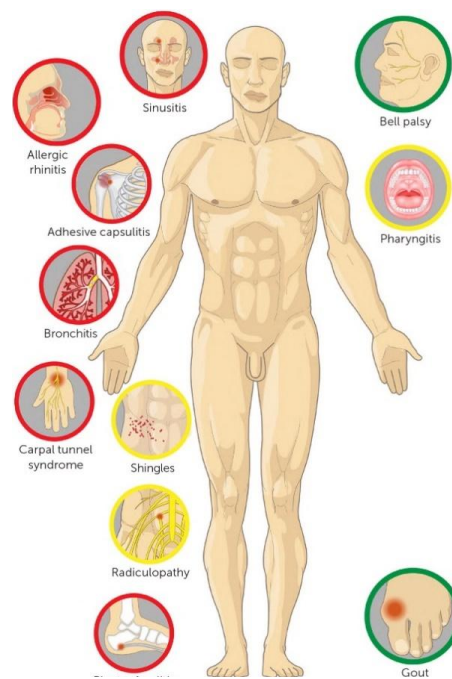
## Corticosteroid Stewardship

### Why is this important in the Urgent Care setting –

- High frequency of steroid use in the Urgent Care setting
- Even short-term use can result in negative outcomes – including increased risk of sepsis, fractures, venous thromboembolism, gastrointestinal bleeding, and heart failure.
- Inappropriate use exposes patients to the same potential complications with no expected clinical benefit.
- Risk to the patient and clinician alike

### Education is key – best practice for appropriate use -

| Proven Benefit to Balance Any Harm                                                                                                                                                                                                                                                                                                                                                                                | May be beneficial depending on clinical situation                                                                                                                                                                                                                                                            | Potential Harm > Benefits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Bell's Palsy, including Ramsay-Hunt Syndrome</li> <li>• Flares of diagnosed rheumatologic conditions</li> <li>• Asthma exacerbations</li> <li>• Significant COPD exacerbations</li> <li>• Croup</li> <li>• Presumptive diagnosis of polymyalgia rheumatica, pending confirmation</li> <li>• Presumptive diagnosis of temporal arteritis, pending confirmation</li> </ul> | <ul style="list-style-type: none"> <li>• Severe or significant contact dermatitis where topical steroids may be insufficient or contraindicated*</li> <li>• Pericarditis</li> <li>• Gout</li> <li>• Pharyngitis with severe pain, swelling</li> <li>• Urticaria/angioedema</li> <li>• Anaphylaxis</li> </ul> | <ul style="list-style-type: none"> <li>• Symptom relief in URI, RTI, cough</li> <li>• Pneumonia</li> <li>• "Pick me up"</li> <li>• Allergic or other rhinitis</li> <li>• Sinusitis</li> <li>• Otitis media</li> <li>• Varicella zoster (shingles), except Ramsay-Hunt</li> <li>• Mild to moderate severity strep/viral pharyngitis</li> <li>• Acute musculoskeletal injuries including back and neck pain</li> <li>• Acute radiculopathy</li> <li>• Osteoarthritis</li> <li>• Tendonitis</li> <li>• Non-rheumatologic arthralgia</li> <li>• Aphthous stomatitis (consider topical)</li> </ul> |



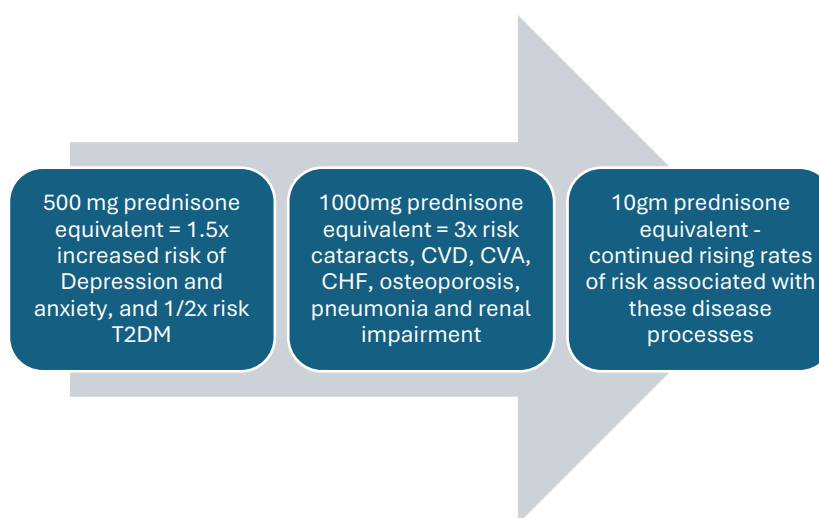
### Understanding the Risks –

| Immediate Effects                                   | Long Term Risks                                                      |
|-----------------------------------------------------|----------------------------------------------------------------------|
| Increased blood sugar levels                        | <b>Diabetes, DKA</b>                                                 |
| Platelet aggression and coagulation protein changes | <b>Thrombus – DVT, PE, MI, CVA</b>                                   |
| Vitamin D/ Calcium Homeostasis                      | <b>Fractures, osteopenia/osteoporosis, growth delays</b>             |
| Immunosuppression                                   | <b>Sepsis, bacterial infections, acne</b>                            |
| Fluid Retention                                     | <b>CHF, Hypertension</b>                                             |
| Growth factor and cytokine antagonism               | <b>Ulcerations, delayed wound healing, surgical wound dehiscence</b> |
| Increased ocular pressure                           | <b>Glaucoma, cataracts</b>                                           |
| Fat redistribution, increased appetite              | <b>Weight gain, moon face</b>                                        |
| Cortisol pathway disturbance                        | <b>Psychosis, anxiety, insomnia</b>                                  |

## Know the numbers -

| Infection                                                                                                                                             | Cardiovascular                                                                                                                                                                 | Musculoskeletal                                                                                                                        | Gastrointestinal                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Increased risk of sepsis up to 3 months</li> <li>• Increased pediatric pneumonia risk for 90 days</li> </ul> | <ul style="list-style-type: none"> <li>• 250% increase in CHF risk for first 30 days post use, baseline by 90 days</li> <li>• 300% increased risk of DVT for months</li> </ul> | <ul style="list-style-type: none"> <li>• 2x risk of fracture for 1 month, baseline by 60 days</li> <li>• AVN risk increases</li> </ul> | <ul style="list-style-type: none"> <li>• 2x Increased risk of GI bleed for 30 days, baseline by 90 days</li> </ul> |

## Cumulative lifetime risk – the more use over a lifetime, the greater the risk:



## What can you do now to effect change in your practice?

- Only prescribe corticosteroids to patients when the benefits outweigh the risks.
- Discuss risk with patients to foster joint decision-making and increased patient safety while maintaining a positive patient experience
- Communicating tangible risk values to your patients may help them better understand why inappropriate use is not benign
- Utilize the lowest effective dosing and duration
- Educate patients on risks vs benefits and offer alternatives to target the same goals

### References

Short-Term Systemic Corticosteroids: Appropriate Use in Primary Care - AAFP  
<https://www.iucm.com/systemic-steroid-stewardship-in-urgent-care-recognizing-indication-creep-to-limit-avoidable-harms/>  
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Einarsdottir MJ, Ekman P, Molin M, Trimpou P, Olsson DS, Johannsson G, Ragnarsson O. High Mortality Rate in Oral Glucocorticoid Users: A Population-Based Matched Cohort Study. *Front Endocrinol (Lausanne)*. 2022 Jul 8;13:918356. doi: 10.3389/fendo.2022.918356. PMID: 35872995; PMCID: PMC9304700.

Price DB, Trudo F, Voorham J, Xu X, Kerkhof M, Ling Zhi Jie J, Tran TN. Adverse outcomes from initiation of systemic corticosteroids for asthma: long-term observational study. *J Asthma Allergy*. 2018 Aug 29;11:193-204. doi: 10.2147/JAA.S176026. PMID: 30214247; PMCID: PMC6121746