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Appendix 2: MATLAB program for gray correlation analysis.

```
a=vv%vv is the 460*9 matrix of opioid use, usage trends and population data of all aspects
for i=[1:8] % standardization of benefit indicators a(i,:)=(a(i,:)-min(a(i,:)))/(max(a(i,:))-min(a(i,:)));
end
[m,n]=size(a);
cankao=max(a')' % find the value of the reference sequence t=repmat(cankao,[1,n])-a; % find the difference between the reference sequence and each sequence
mmin=min(min(t)); % calculates the minimum difference
mmax=max(max(t)); % calculates the maximum difference
rho=0.5; % resolution coefficient
xishu=(mmin+rho*mmax)./(t+rho*mmax) % Calculate the grey correlation
coefficient
guanliandu=mean(xishu) % take equal weight and calculate relevance [gsort,ind]=sort(guanliandu,'descend') % sorts the relevance by big to small
```